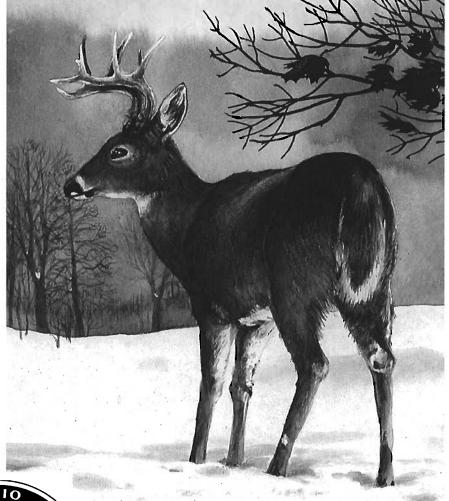
Ohio's WILDlife The White-tailed Deer





A Project WILD Supplement

Ohio's WILDlife—The White-tailed Deer

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- White-tailed Wonders, Wild Ohio for Kids Magazine 2001
- Wildlife Conservation, Division of Wildlife Hunter
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- Deer on Ohio Roadways, News Release
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- 2005-07 Deer Vehicle Collisions by County and
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Part Two: Pro and Con—This section contains information on hunting deer in Ohio as well as various points of view on consumptive and non-consumptive use of wildlife. This information can be used by teachers as background for the following activities or by students as research to conduct debates in class or for reports. It is intended to be a starting point for students to explore and develop their own opinions about use of wildlife in Ohio.

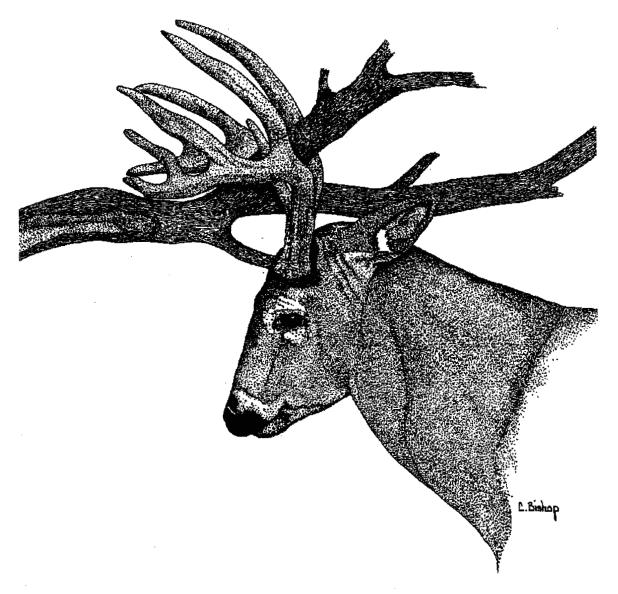
- Project WILD Activity, Pro and Con: Consumptive and Non-consumptive Uses of Wildlife
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- Ohio Statewide Deer Gun Season Dates, News Release December, 2008
- Ohio Deer Gun Season Opening Day Harvest, News Release November, 2007
- Turn in a Poacher—Division of Wildlife Publication 355
- Field Dressing Deer—Division of Wildlife Publication 111
- "What Only the Hunter Knows", Wild Ohio Magazine, Fall 2001
- "Why do Hunters Kill?" By Russ Chastain
- Hunting and Fishing in the Wilderness, The Wilderness Society
- "Should Kids Learn to Hunt?", Wild Ohio Magazine, Fall 1999
- Letters to Whitetails Unlimited
- "What Makes the Animal Rights Movement Tick?" Wild Ohio Magazine, Fall 2000
- "Us and Them...Mending Fences," Wild Ohio Magazine, Winter 1998
- Why Sport Hunting is Cruel and Unnecessary, People for the Ethical Treatment of Animals (PETA) position statement.
- Canned Hunt Fact Sheet: The Unfair Chase, The Humane Society of the United
 States

- What They Say About Hunting, Position Statements on Hunting by Major Conservation or Preservation Organizations, The National Shooting Sports Foundation
- Agencies and Organizations, Project WILD
- Sport Fish and Wildlife Restoration, Cycle of Success
- References



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Part One: Oh Deer!!



This section contains biological information on white-tailed deer as well as activities and content for students and teachers to use.

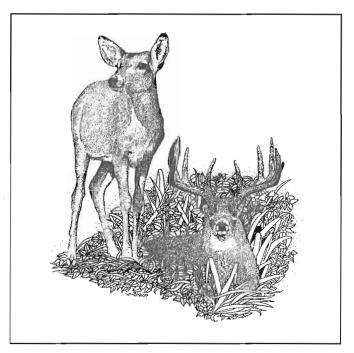
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ODNR Division of Wildlife

Life History Notes

White-tailed Deer

Scientific Name: Odocoileus virginianus





Publication 101 (R503)

Introduction

The white-tailed deer, commonly referred to as the whitetail, is perhaps Ohio's best-known wildlife species. It is seen in the state's wildlife areas, parks, and nature preserves as well as in the backyards of rural and suburban residents. The state's only big game animal, it has provided table fare for generations of the state's inhabitants from Native Americans to thousands of sportsmen and women today. However, the white-tailed deer hasn't always been as abundant in the state as it is today. As a matter of fact, there was a period of time (1904 to 1923) when the deer was absent in the state. As Ohio was settled, habitat was eliminated and hunting was unregulated. By the early 1900s white-tailed deer were extremely rare in the state. Between the 1920s and 1930s, limited stocking combined with the natural movement of deer from neighboring states into Ohio, and the establishment and strict enforcement of hunting laws allowed the development of a herd that today occupies all 88 counties.

Description

The whitetail has two seasonal coats. The spring/summer coat is reddish tan, and relatively short, with a thin and wiry hair texture. The winter coat is more grayish or even bluish tan

with heavy, long guard hairs and a thick undercoat that provides excellent insulation. White patches are found around the eyes, on the throat, belly, tail (underside), and insides of the legs. When in flight, the large white tail or flag, flipped up in the air can be the easiest way to spot the deer.

Whitetails, especially in Ohio, are also well known for their antlers. The whitetail buck grows its first set of antlers when it is a year old. Each year, a buck's antlers begin growing in the early spring. The developing antler is covered with a thick velvety skin rich with blood vessels and nerves. Decreasing day length in the late summer and early fall triggers many physical changes in the buck, including termination of the blood supply to the antlers. The antlers begin to harden soon thereafter and by August or September, the velvet is shed as the buck rubs his antlers against trees and other solid objects in the fields and woods. The buck is left with a rack of hard polished antlers. In a sound environment--abundant and nutritious food and water--racks can grow to massive size. Deer in poor habitat will not only appear thin, but have small antlers as well. Unlike horns of cattle, antlers are not a permanent part of a male deer's body. In Ohio, bucks typically shed or drop their antlers in December and January, following the fall breeding season.

Habitat and Habits

Whitetails are active around the clock, but less so during daylight hours. Most often, whitetailed deer are on the move at dawn and dusk. This behavior can prove hazardous to humans during the breeding season in the fall. Commuters to and from work often encounter deer on the move at this time of year which can result in serious accidents. Drivers should pay special attention October through December when traveling through zones marked with deer crossing signs.

White-tailed deer are often admired for their graceful movement. People enjoy watching them run across a field or clear a fence or other barrier from a virtual standstill. Deer have been recorded leaping heights of as much as eight feet to clear a fence or barrier.

Whitetails are not very vocal, but scientists have identified at least 13 different sounds they make that are associated with various activities and behaviors.

Hearing, sight, and smell are well developed in the white-tailed deer as any hunter will verify. Individually these senses are impressive; in combination they go a long way in helping deer survive. Hearing is used to identify the presence of other animals, including human beings, nearby. Smell is also used for this purpose and to help the deer select food. The whitetail's eyes are set to the side of its head allowing it to see almost all the way around its body.

Whitetails prefer an area with diverse food and cover types, including mixed-aged timber stands. Ideal habitat will provide a mixture of forest, brushland, and cropland in blocks of one to two square miles.

Deer in Ohio eat a wide variety of items; among them are: wild crabapple, corn, sumac, Japanese honeysuckle, grasses, greenbriar, clover, soybeans, jewelweed, acorns, dogwoods, and miscellaneous woody plants.

Reproduction and Care of the Young

Courtship activities among deer begin in mid-October. Bucks will chase does over a period of five or six days prior to mating. The buck will mate with a doe several times and remain with her for a few days keeping other males away. Eventually the two will separate and the male will go on to breed more does before the breeding or rutting period ends. The buck provides no assistance to the female in caring for the fawn(s). In good habitat, many fawn does will be bred their first fall and give birth to a single fawn the following spring when they are only a year old. Most adult does will have twins and occasionally triplets. Fawns are born quickly with the doe either standing or ly-

ing down. Does may return to the same place each year to give birth. When born, male fawns weigh between 4 and 14 pounds, and females 3-8 pounds. Fawns are born with their eyes open and they are able to walk within an hour or two. Fawns will nurse two or three times a day for the first few days after birth and then return to thick cover after each meal. At about one month the fawns begin to accompany their mother when she goes to eat. The family group of mother and fawns will stay together until the following spring. At that time, the doe will return to her favorite fawning territory, excluding all deer, including her fawns, from this preferred area. Her doe fawns will remain in the general area and rejoin her sometime mid- to late summer. They will remain in proximity of their mother their entire life. Buck fawns, in most cases, will leave their birth area in the spring and travel great distances to set up new home ranges. Those bucks that don't leave in the spring will be forced to do so in the fall, both by their mother and other related females.



Management Plans

Whitefall deer are perhaps the most intensively managed wildlife species in the state. Deer are many things to many people. They may be viewed as superb game fare and a trophy by sportsmen and women, a prized addition to the landscape by the nature enthusiast, a threat to crops by the forester and farmer, or a road hazard for the motorist. Accommodating these diverse interests has been the responsibility of the ODNR Division of Wildlife since deer began returning to the state in 1923.

The Division's official deer management goal is to maintain county deer populations at a level that provides maximum recreational opportunity including hunting, viewing, and photography, while minimizing conflicts with agriculture, motor travel, and other human activities. Each year wildlife biologists evaluate deer herd population numbers and establish appropriate hunting season dates and bag limits for white-tailed deer.



Viewing Opportunities

You usually don't have to go far in Ohio to see a white-tailed deer. They are present in all 88 counties and are often seen along the road, in local parks, and sometimes your own backyard. Twenty-nine of Ohio's 80 Watchable Wildlife sites are recommended as places to see white-tailed deer. Among them are: Deer Creek, Killdeer Plains, Spencer Lake, Funk Bottoms, Killbuck Marsh, Salt Fork, Egypt Valley, and Waterloo wildlife areas; Paint Creek and Hueston Woods state parks; Mohican-Memorial, Hocking, and Shawnee state forests; and Fowler Woods and Tinkers Creek state nature preserves.

Do Something Wild!

The ODNR Division of Wildlife manages for wildlife diversity in the state. We attempt to create or conserve the habitats that will support as wide a variety of wildlife as possible. Many species like the white-tailed deer are hunted in the state, but many more are not. The Division has a special program to manage and research non-game species that is supported by the generous citizens of the state of Ohio. With money either donated through the state income tax checkoff, by the purchase of wildlife license plates, or direct contributions to the Endangered Species Special Account, the Division is able to purchase critical habitat that is essential to sustaining many species of wildlife and to implement special efforts like the reintroduction of the osprey and the trumpeter swan to the state.

Contributions to our Wildlife Diversity Program are accepted throughout the year. To make a donation, please send a check to: Endangered Species Special Account, ODNR Division of Wildlife, 2045 Morse Road, Bldg. G, Columbus, Ohio 43229-6693. All contributions, whether made on your income tax return or directly, are deductible.

At a Glance

Mating: Polygamous

Peak Breeding Activity: Early to mid-November; begins as early as mid-October and runs through mid-January

Gestation: 187-222 days; average 200 days

Young are Born: Mid-May through July; peak in late May through mid-June

Litter Size: 1 in first year; 2 and sometimes 3 in later years

Young Leave Parents: Weaned at 10-12 weeks

Number of Litters per Year: 1

Adult Weight: Males-130-300 pounds; females-90-210 pounds

Adult Body Length: 52-95 inches

Life Expectancy: Up to 15 years, but the average is 2 years for males and 3 years for females in the wild

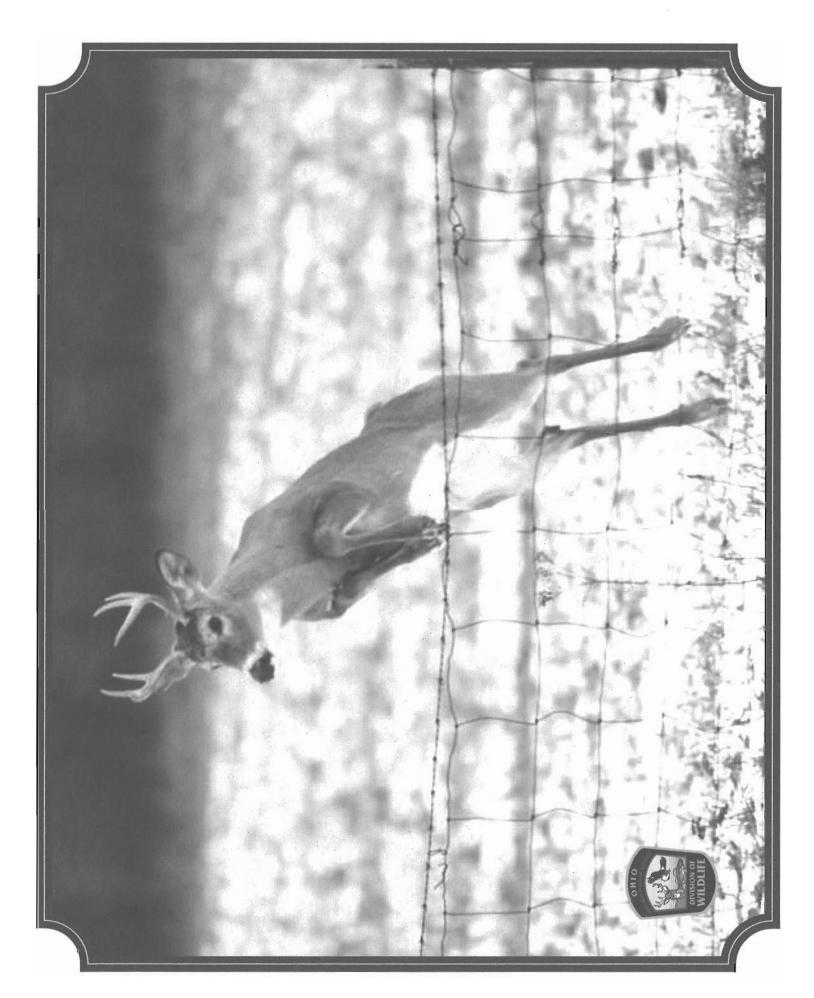
Migration Pattern: Year-round resident; home range is 1/2 -2 square miles

Typical Foods: Include wild crabapple, corn, sumac leaves and stems, grasses, clover leaves, jewelweed leaves, acorns, and dogwood fruits and stems

Native to Ohio: Yes.







The White-tailed Deer

Classification Mammal (Ungulate)

leaves, stems, grasses, buds, Crabapples, corn, various

acorns, fruit, and other vegetation.

fields, anywhere along rivers and other water sources. Open woods, farms, old Habitat

Length: 60-95 in. Size

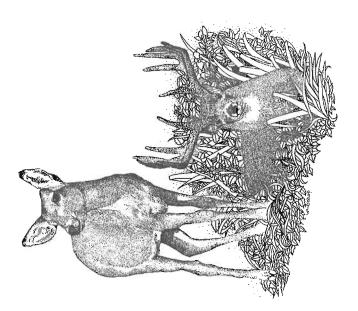
Weight: 120-300 lbs.

plentiful. They thrive in Ohio farm country, in our with white-tailed deer in Ohio. Today they are forests, our parks, and even in the suburbs. Almost all of us have had experiences

what was once farmland in the hilly part of Ohio deer was a rare treat. Deer had been pushed out of our state as we settled the land and cut down most of the original forest for cropland. Much of is becoming forest again. People discovered that jobs in the city. We also learned how to protect But it was not very long ago that seeing a of wild animals. Today, wildlife officers strictly the land was poor for crop farming and took our wildlife from poaching, the illegal killing enforce laws that protect deer, but still let us have a hunting season that thousands enjoy.

foods include wild fruit, young leaves and stems, cropland are good deer habitat. Their favorite of different ages, mixed with brushland and animals, they thrive in mixed habitat. Trees While we may think of deer as forest acorns, and grains like com.

Antlers fall off in winter when the mating season other bucks as they compete for females. The strongest buck may mate with many females. Male deer, or bucks, grow antlers in early spring. At first they are covered with a downy skin. By fall the buck has rubbed off the itchy **velvet** and the antlers are smooth and shiny. antlers. Antlers are used to push and shove Does, or female deer, usually do not have is over and are grown again the next year.



rest and stay hidden when they are not nursing. nabitat, does often have twins. Fawns can walk when they are only one or two hours old. They The newborn deer have spotted coats that help Fawns are born in the spring. In good deer



them hide in tall grass and weeds. When they are about one month old they join the doe in search of food.

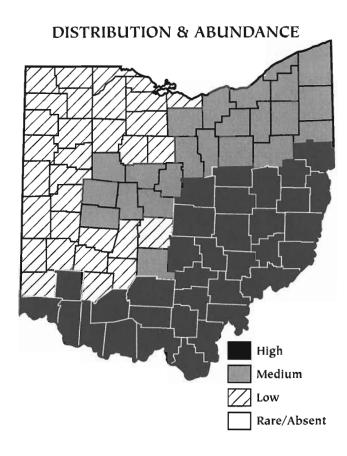
danger for other deer. This is what we see most The large white tail or "flag" is often a signal of In the summer, the white-tailed deer's coat is a reddish tan; the winter coat is grayish tan. often as the deer runs away.

legs with powerful muscles. That is why they can Deer have large ears they can turn from side to side to help them hear if predators might be run so fast. All these adaptations help the deer approaching. They also have a good sense of see in almost every direction. Deer have long have eyes on the sides of their head and can smell and keen eyesight. Unlike people, deer survive.

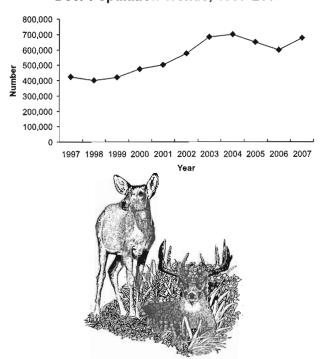
the road. Today we manage deer herd numbers too many deer in one area there are problems with laws and hunting seasons that both help with problems when there are too many deer, always happy to see deer. But when there are for the farmer, the forester, and for drivers on Most people who love the outdoors are and protect deer where there are too few.

around to remind us that people and wildlife can protection white-tailed deer will always be With good management and habitat

White-tailed Deer



Deer Population Trends, 1997-2007



BEST VIEWING & HUNTING OPPORTUNITIES

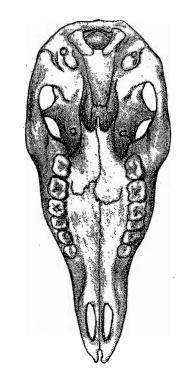
- Lake LaSuAn Wildlife Area, Williams County
- Deer Creek Wildlife Area, Pickaway County
- Jockey Hollow Wildlife Area, Harrison County
- Woodbury Wildlife Area, Coshocton County
- Waterloo Wildlife Area, Athens County
- Tranquility Wildlife Area, Adams County

2007 UPDATE

Although absent from the state for nearly 2 decades, the white-tailed deer, Ohio's only big game animal, now occurs in all 88 counties. Differences in the amount of forest cover, agriculture, and human population density, however, have contributed to a patchwork of densities across the state. In general, deer populations are highest in the state's southeast Hill Country, lowest in the farm counties of the west, and intermediate in the glaciated counties of the northeast. Good numbers of deer and excellent public hunting opportunities make southeast Ohio the favorite destination of many resident and nonresident deer hunters. This region also continues to be the best bet for a trophy whitetail. In spite of record harvests 2 of the past 3 seasons, pockets of growth will push the herd up slightly from last season to just over 675,000 deer statewide. Herd growth will largely be concentrated in the northwest and southeast corners of the state. A record harvest is expected once again this year. Ohio's deer herd remains healthy and disease-free. Since 2002, we have tested an average of nearly 775 hunter-harvested deer each year for Chronic Wasting Disease and Bovine Tuberculosis. Last year we tested an additional 450 road-killed deer. We failed to detect these diseases in all samples.

Survey details and historical data can be found at: www.dnr.state.oh.us/Home/tabid/10580.aspx





SKULL

DENTAL FORMULA (32 teeth)
Incisors Canines Premolars Molars

0 0 3 3
3 3 Upper







TRACKS





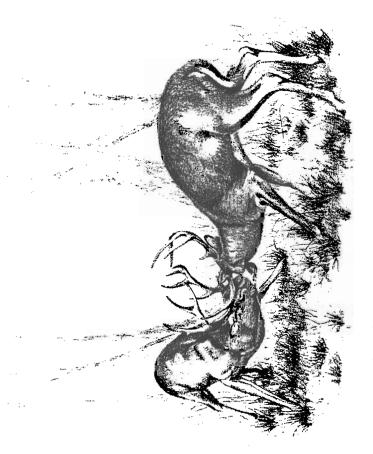




HIND



ANTLER DEVELOPMENT IN THE WHITETAIL DEER



First of all - what are antlers? Antlers are extended growths of the frontal plate of the skull. They are grown for the purpose of establishing dominance for breeding rights. This is nature's way of perpetuating the species. The larger, healthier males will generally grow the largest antlers, and carry out the majority of the breeding.

near equal size meet, a physical and often violent battle may take place.

Antlers are one of nature's fastest growing tissues, often growing as much as ½ inch per day. In early

visually, thus avoiding fights and serious injuries, but when two males of

represent only about 2% of the total buck

population.

Bucks growing true non-typical antlers

spring with the lengthening of daylight hours, antler growth begins. The term used to explain this process is called *Photoperiodism*. In other words, with the lengthening of daylight hours, as perceived through the deer's eyes, activates the pituitary gland, which stimulates antler growth. The common term

antlers is called the the minerals needed to form the antlers. These ous drain on the bucks this time, it is late August a buck growing velvet stage. The velvet network of blood vessels which are withdrawn is actually a series or which carry and deposit minerals are primarily calcium and phosphorus, rom the skeletal structure, putting a tremendgrowing system. Antler growth takes about four months to complete. By

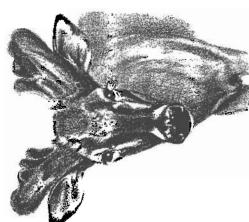


Mid April

ed production of the male hormone testosterone, and this completes the antler growth cycle. The antlers harden and the velvet dries and begins to shed. The

and the daylight hours are becoming shorter, which once again

effects the pituitary gland. This effect causes an increas-

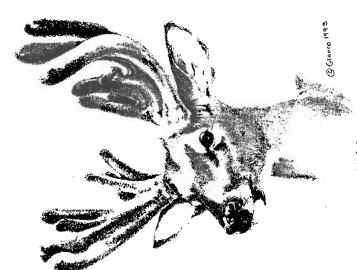


Mid May

velvet shedding process normally happens quite splits and falls off of the often within hours. This is fast. The velvet literally The remaining blood is Throughout the fall, as newly hardened antlers, contrary to the common belief that the velvet must be rubbed and what causes the antlers the buck continues to rub his antlers, some addioolished from the antlers. to be stained brown.

tional staining from vegetation may occur. Testosterone levels in the bloodstream also cause the antlers to be shed. As winter progresses, and the number of daylight hours grow increasingly

longer, once again perceived through the buck's eyes and effecting his pituitary gland, the production of testosterone is lessened.



dant breeding. This usually occurs in the s why some bucks are mone levels causes a crystallization between he antler burr and the bedecal and finally the the antlers. Another actor that causes the estosterone levels to older and more dominant bucks. This seen without antlers shedding or casting of be lowered, is abunas early December.

Let's look into the factors that determine Now we know about how and why antlers are grown.

takes a buck 41/2 years to reach full maturity. The buck's antlers age, genetics, and nutrition. How does age affect a bucks antlers? the size and the shape of a buck's antlers. The three factors are:

structural growth is complete and only ous, the same minerals that make up growth, this allows lesser amounts to be used for his antler growth. This explains why the buck's antlers year. Beyond 41/2 years of age, the deer's skeletal structure. Now, since these minerals are needed more are primarily calcium and phosphorfor completing the deer's structural normally grow increasingly larger each

a minimal amount is then required for maintenance. This allows from this point on, a buck's antlers will greatly increase in size for greater quantities to be used in antler development. Normally

This decrease in hor-

the size and shape of a buck's antlers. Three factors, age, genetics and nutrition will determine

and mass, (for approximately three to five yrs.) before they start to decline. It should be noted that a buck's antlers can diminish in size at any age due to injury or poor health Genetics determine the size and the shape of a buck's potential antler growth. Some deer are genetically superior to other deer.

For example, a buck with superior genetics might age then another buck of

41/2 or 51/2 years of age. Genetics is also respons-

grow a larger set of antlers at 31/2 years of ble for the shape of a

buck's antlers. For example: the number of



Late August

points, the length of the points, the mass of the antlers, a wide or narrow rack, and typical or non-The Boone and Crockett Club is an organization that has established the standards for determinmeasuring typical characteristics. and

trophy class animals.

and Non-Typical. Typical antlers are defined as having all points B & C has broken down whitetail antlers into two categories; Typical

stemming upwards in a normal fashion from the main beam. Non-typical antlers have one or more of the following characteristics: Drop flag points. Once a genetic parring injuries, the antlers will generally carry a typical antler frame but in addition may pattern, either typical or nonypical is established, and generally reflect this same ines, burr tines, palmation, split beams, forked tines, and

they are a product of "hair-like" and moose). They are true bone of the cervidae family (deer, elk Horns differ from antlers in that phosphorus and other minerals. Antlers are grown by members and are composed of calcium, issue and are never shed. Antlers are shed and regenerated each year.

pattern from year to year. At this time it should also be noted that this same gene pool will also determine the deer's body size, shape, and coloration.

genetic make-up, without proper nutrition he can not grow antlers researched and studied. Regardless of the buck's age, and his to his full genetic The third factor, nutrition, is the one that has been well

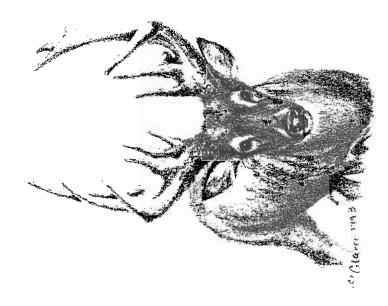
potential. Ideally, for a buck to grow his .08% calcium, and

06% phosphorous. Any amounts beyond these levels will not be utilized by the antlers. A lesser

east 16% protein,

potential, he needs a diet containing at

antlers to his full



percentage of these

could

minerals

cause the buck's

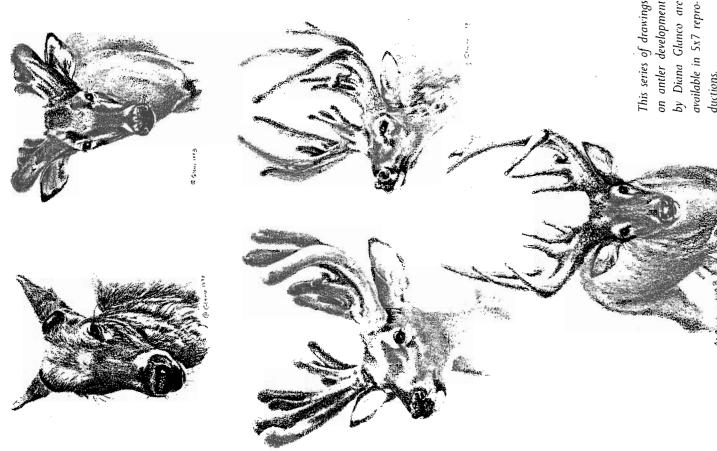
antler development to suffer. A buck coming out of winter healthy and in good shape, already has

a head start for growing a good set of antlers the next

Growth Completed - Sept. 1st.

fall. This is because he doesn't need to replenish his body's supply of nutrients at the time antler growth is occurring.

deer such as the ones pictured in this book, a buck needs to be In summary, to have superior antler development in a whitetail at least 41/2 years old, he needs the nutritional factors mentioned above, and finally he must have an exceptional genetic make-up.



by Diana Glanco are available in 5x7 reproductions.

(see opposite page)

White-tailed Deer

The white-tailed deer is Wisconsin's official state wildlife animal. Its American cousins include mule deer, moose, elk, black-tailed deer and caribou. All deer have hooved feet, slender bodies, and long thin legs. Deer are the only group of animals in the world that grow antlers. Unlike horns that are built to stay on forever, antlers are made of solid bone and are shed every year.

Like other members of the deer family, the white-tailed deer is a herbivore. It grazes on grass and leaves during the summer and browses on twigs and buds during the winter. Male deer are called **bucks** and females are called **does**. Baby deer are usually known as **fawns**. Deer are strong, fast, and graceful. And, white-tailed deer probably live in a green place near you!

Adaptations for Survival

Deer may stand 3 feet high and weigh 200+ pounds.

White tails are used to communicate with other deer. A tail held up means "run for cover."

A deer's coat is reddish brown in summer and grayish brown in winter. This color-change coat keeps deer camouflaged all year.

Glands on the deer's legs and feet leave scent on the trail and help to communicate with other deer.

Long, powerful legs enable a deer to run up to 40 mph, jump 9 foot fences, broad jump 30 feet, and swim 13 miles per hour. Antiers are used by the bucks to establish who is the boss. The "boss" gets to mate with the most females.

Oversize ears can hear incredibly well. They can also rotate like a radar to pick up sounds.

Big eyes located on the side of the head allow the deer to see ahead, to the side, and behind without moving its head.

A long nose contains membranes which capture scent particles. A deer's nose is about 100 times more sensitive than ours.

Teeth are designed to chew tough plant foods. Deer have incisors in the lower jaw for biting and molars for grinding.

re lower jaw for biting and molars or grinding.

Sharp hooves provide excellent traction. Deer can

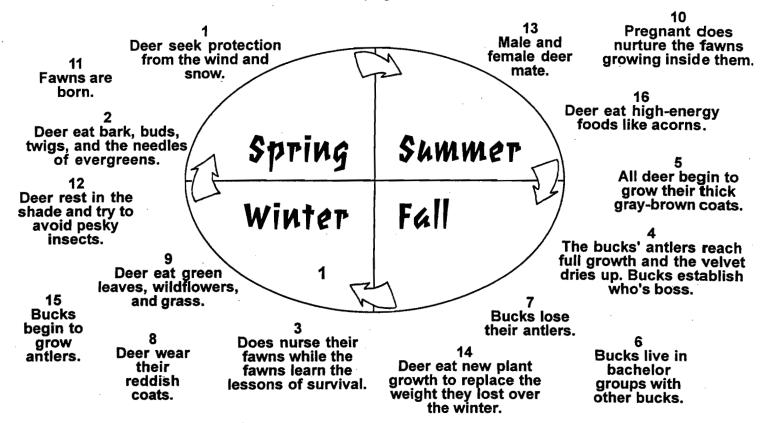
A four-chambered stomach allows deer to digest tough plant foods. Deer eat quickly and barely chew their food. Later, as they rest, they cough up their food and chew it. Sharp hooves provide excellent traction. Deer can also use them to dig for food, signal other deer by stomping, defend themselves, and make scrapes during the mating season.

WILD in the City Series:

A Deer's Year

Deer don't really have typical days! Bucks, does, and fawns must do things differently in order to survive. Each day their activities and behavior are molded by the time of the year, the weather conditions, and the quality of their habitat. The activities of people also affect how deer behave.

However, there are certain things which deer do each season. Can you match the numbered statements to the right season? The first one has been done for you. A few answers fit more than one season. Answers are on the bottom of this page.



Read All About It!

Want to know more?

Survival: Could You Be a Deer? by Roger Tabor. As a deer pursuing its daily life, you make choices that will either insure your survival or cause your death.

The Whitetail by Mark E. Ahlstrom.

Whitetail - The Story of a White-tailed Deer by George Laycock.

Zoobooks: The Deer Family by Timothy Levi Biel

Answers to *A Deer's Year*. Spring - 3, 8, 11, 14, 15; Summer - 3, 6, 8, 9, 12; Winter - 1, 2, 7, 10; Fall - 4, 5, 13, 16.

Books for fun!

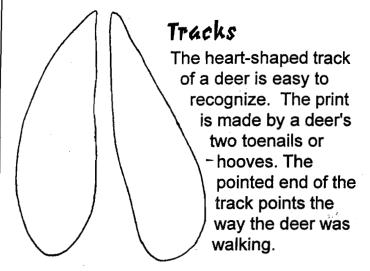
Bring Back the Deer by Jeffrey Prusski. A young brave pursues a deer through the winter forest and begins to understand his indentity and inner strength.

Frankie and the Fawn by Marcia Polese and Dorothea Wender. An injured fawn has the good fortune to be found by two youngsters whose mother is a veterinarian.

Long Spikes by Jim Arnosky. Long Spikes is a yearling who loses his mother. He grows to maturity facing the dangers of predators, hunters, and winter.

Deer Signs

Deer leave many signs behind. If you observe the signs carefully, you may be able to learn some interesting things about deer.



Trails

Trails are narrow paths that deer travel in their daily routines. Trails connect food and cover. If you find a trail, follow it both ways to figure out where the deer are coming from and where they are going. Why do you think deer establish and follow trails?

Deer beds

Places that a whitetail has rested on the ground are known as beds. Beds appear as areas where the plants or ground litter have been flattened. They are 3-4 feet long and 1 1/2 feet wide. Deer beds are obvious in the snow.

Buck rubs

Trees that have had the bark removed on one side are called rubs. They are made by bucks rubbing their antlers against the tree. Fresh rubs are usually found on small trees or saplings from September to November.

Feeding signs

A deer lacks upper teeth in the front of its mouth. The deer uses its lower teeth to press a twig against the rough pad on the top of its mouth. By twisting its head, it tears the end of the twig off.



This twig was bitten off by a deer.



Scat

Deer scat, or droppings, appear as clusters of oblong, brown marbles. They are not nearly as rounded as those left by rabbits. You can learn a lot from animal droppings. In winter, when deer feed on woody twigs and evergreens, the droppings are small and hard. In the spring and summer, deer have very soft droppings that stick together in soft clumps. What are deer eating this time of year?



Winter scat

Summer scat

Bones & antlers

Deer that die leave behind their bones. Sometimes those bones tell a story about how the animal died. For example, a deer found near a road with broken bones was probably hit by a car.

Bucks also shed their antlers. However, don't be surprised if you never see a deer's antlers lying in the woods. Small animals find the antlers and eat them. Antlers and

bones contain calcium and other minerals which animals need to survive.

This "WILD in the City" publication was made possible by the Wisconsin Department of Natural Resources and a grant from Project WILD.

Written and designed by Beth Mittermaier, June 1996.

People and Deer

We want to see deer, but we don't want them to eat our tulips, lettuce, or lilacs! We love to watch them, but not as they dash across the road in front of our cars! Wildlife does add excitement and interest to our community, but too many wild animals can cause problems.

Life in the big city

Deer are very adaptable. They quickly get used to the sights, sounds, and smells of the city. Deer living near busy streets are not alarmed at ordinary vehicle noises or the close presence of people.

Habitat is where it's at

All species of wildlife depend on their native environment, or habitat, for health and survival. An animal's habitat provides food, water, shelter, and space in a suitable arrangement.

Green places in cities, such as parks, riverways, suburbs, and natural areas, provide deer with everything they need to survive. In addition, some people feed deer to attract them to their backyards. Others plant shrubs which deer prefer.

but of control

Deer can reproduce rapidly. When food and cover are available, nearly all adult does will give birth to twins each year; some bear triplets. Even one-year-old does will often bear a fawn when conditions are good.

Other than vehicle collisions, there are few ways an urban deer can die. There are no major natural predators in the city and hunting is usually not allowed for safety reasons. Consequently, the urban deer population grows quickly.

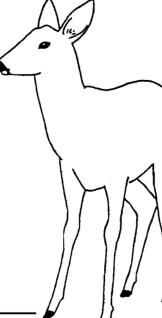
What's a city to do?

Hunting is an economical and effective way to control deer herds in Wisconsin. It also provides food and recreation for many people. However, around cities huge areas are closed to hunting. Firearms ordinances, private lands, safety considerations, and opposition to hunting all limit its use. So. . . what's a community to do?

- ♣ Trap deer and send them to a deer farm?
- # Trap deer and euthanize (or kill) them?
- Use contraceptives or surgery to prevent them from having young?
- ♣ Do nothing?
- Allow hunting in certain areas by changing gun laws or permitting bowhunters to hunt?
- Attract the deer to feeding stations and hire professional hunters to shoot them?
- ♣ Fence areas that deer could damage?
- Repel deer with odors or tastes they avoid?

Too many?

Different people have very different opinions about how many deer is too many deer. Do you think there are too many in your community? Is anything being done to control their population? Watch the newspaper for articles about deer.







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White-tailed Wonders

by W. H. (Chip) Gross

Do you know what wild animal is Ohio's official state animal?



If your answer was "deer," you're right! White-tailed deer are Ohio's best-known wildlife.

What Deer Eat...

Deer in Ohio eat many different foods: wild crabapple, corn, sumac, Japanese honeysuckle, grasses, greenbriar, clover, soybeans, jewelweed, acorns, dogwoods, and other woody plants.

Deer History

Deer live in all 88 Ohio counties. But that has not always been true. From about 1904 to 1923 very few, if any, deer lived in Ohio. That's because deer hunting was unregulated before the year 1900. That means there were no laws to protect deer. Also, good habitat—the food, water, shelter, and space deer need to live—had been destroyed.

Thanks to the Division of Wildlife, deer are back in Ohio. More than 450,000 whitetails live in the state. They returned because deer hunting is now highly regulated. In fact, there are so many deer living in Ohio that deer hunting is necessary to control the size of the deer

herd. Deer hunting is the most popular type of nunting in Ohio. Deer are our state's only big-game animal. Deer meat is called venison and is very nutritious.

Deer Descriptions

White-tailed deer get their name from the white underside of their tail. When a deer runs it flips its tail straight up. The white "flag" is easily seen then and signals danger to other deer.





A deer's senses of smell and hearing are very good. Its eyesight is less keen. Deer are also great jumpers. They have been known to jump eight-foot-high fences.

Female deer, known as does (pronounced "doze"), usually weigh 90 to 210 pounds. They

give birth to one fawn their first year and usually twin fawns each year after that. Sometimes they might even have triplets.

Male deer are called bucks. They usually weigh 130 to 300 pounds. The largest buck ever weighed in Ohio was 408 pounds!

Continued on next page



Deer Antlers

Buck deer grow antlers, while doe deer normally do not. Antler growth begins in the spring and is over by late summer. The bucks then rub their antlers against small trees to remove the "velvet." This velvet is a layer of special skin that covers the antlers as they grow.

Bucks use their antlers to fight each other during the fall breeding season.

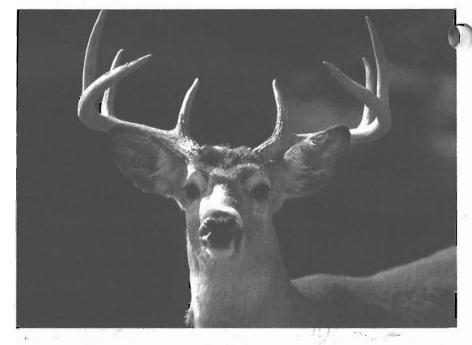
Their antlers drop off in late winter. A deer grows a new set of antlers the following summer.

Antlers are true bone and different from horns. Animals that have horns never lose them. Members of the deer family—like moose, elk, and deer—shed their antlers each year.

Antlers can grow up to one-half inch a day. That is one of the fastest growth rates

in nature. Scientists doing cancer research are studying deer antlers to try and find out why antlers grow so fast. The scientists hope that if they can answer that question, they may also learn why cancer cells grow so fast. Who knows, maybe deer antlers hold the secret to a cure for cancer!





Quick Quiz True or False

I	The white-tailed deer is Ohio's official state anim		
2.	Deer have always lived in Ohio.	T	F
3.	Deer hunting is necessary to control the size of Ohio's deer herd		F
4.	Female deer are called does and males are called bucks.	T	F
		т	F

5. Antlers are the

same as horns.

Can You Graph Ohio's Deer Herd?

Using the numbers and graph below, plot the growth of Ohio's deer herd over the last 100 years.

YEAR NUMBER OF DEER

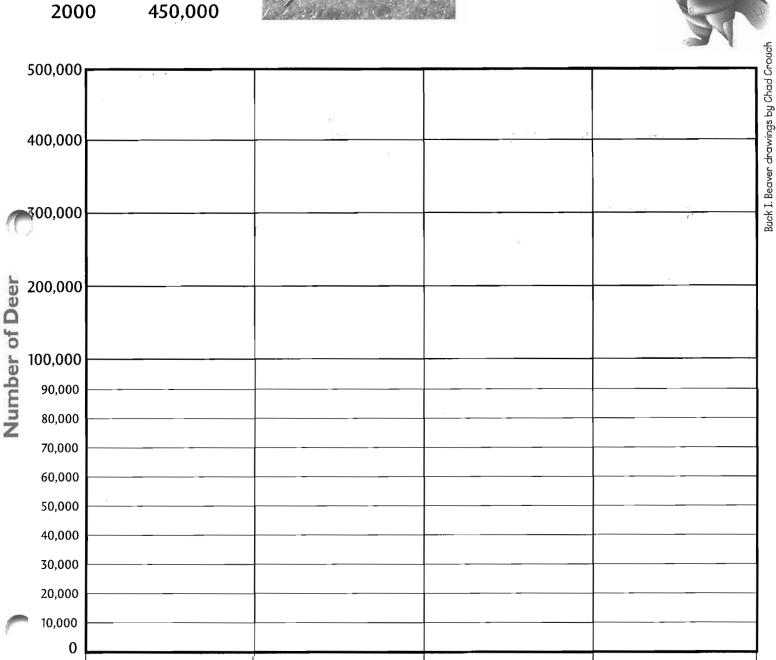
1900 0
1925 1,000
1950 15,000
1975 85,000
2000 450,000

1900

1925



I deer-ly like whitetails. I wish I could grow antlers.



1950 **YEAR** 2000

1975

Section 4: Conservation

Chapter 9: Wildlife Conservation

In this chapter, the student should learn:

- Two reasons for a decline in wildlife populations
- 2. The difference between conservation and preservation
- 3. The difference between a renewable and non-renewable resource
- 4. Two benefits regulated sport hunting provides to wildlife conservation
- Two funding sources for wildlife management programs

Historical View Of Land Use

To understand wildlife management completely, we must first learn its history. Before European settlers arrived in America in the early 1600s, unpolluted lakes, rivers, prairies, and forests stretched across this country. The landscape had no roads, cities, or industries.

The land held an abundance of many kinds of wildlife. Wildlife wildlife. Wildlife consists of those animals that range freely in their natural environment, not kept in zoos or held as pets or farm animals. Some of Ohio's original wildlife populations included:

- deer
- bears
- · wolves
- elk
- bobcats
- mountain lions
- wild turkeys
- · squirrels
- skunks
- · badgers
- · bald eagles
- songbirds
- numerous fish, reptiles, amphibians, and insects

This country was soon settled with people. Towns, cities, and industries replaced the habitat that was once home to wild animals. Habitat is an area that supplies everything wildlife needs to live including food, water, cover, and space.

Habitat





Cover

Water





Food

Space

WILDLIFE CONSERVATION KEY TERMS

Wildlife

Habitat

Conservation

Preservation

Poaching

Bag Limits

Propogation.

Wildlife Management

Limiting Factor

Renewable Resource

Non-Renewable Resource

Carrying Capacity

Predators

Prey

Game

Sport Hunting



OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE

MISSION STATEMENT

We are dedicated to
conserving and
improving the fish and
wildlife re-sources and
their habitats, and
promoting their use and
appreciation by the
people so that these
resources continue to
enhance the quality of

life for all Ohioans.

One of the largest hardwood forests on the earth made up Ohio's original habitat. However, the forest soon fell to the settler's ax, and the ground was plowed to make way for agriculture. Wetlands were drained and made ready for farming to meet the needs of man. This destruction of habitat was, and still is, the leading cause for the decline of some wildlife populations.

In addition, there were very few laws during the early 1800s to control hunting and trapping. As a result, uncontrolled hunting and trapping added to the decline in wildlife populations. Many people made a living as market hunters and trappers because they made a profit in towns and cities where fur and wild game were in demand.

Industries such as sawmills, gristmills, tanneries, and distilleries grew in number as time passed. The industries led to polluted air and water that is harmful to wildlife populations. The wildlife habitat in Ohio became polluted, destroyed, or changed. Animals had to adapt, migrate, or die.

Ohio became a state in 1803. Less than 100 years later, bears, bison, mountain lions, wolves, white-tailed deer, and wild turkeys disappeared from our state. Many other wildlife species were greatly reduced in Ohio. Some wildlife, like the passenger pigeon, became extinct.

The early settlers used natural resources without thinking of the future. The people did not realize that they were hurting wildlife or that they were using up all of the natural resources.

This led concerned outdoorsmen and legislators to take action to help our wildlife. In order to do this, a wiser and more conservative approach to using natural resources was needed.

The State Legislature formed the Ohio Fish Commission in 1873 to reverse the decline in fish populations. This was the first major step in initiating wild-life conservation in Ohio. In 1886, the agency was given responsibility for game animals as well as fish and became the Ohio Fish and Game Commission.

The first efforts of the Fish and Game Commission were to enforce new laws through fish and game wardens. Game wardens (now known as wildlife officers) are law enforcement officers that specialize in wildlife laws. These laws were made to protect wildlife that was in danger of being eliminated from Ohio.

Laws were passed that made fishing, hunting, or trapping

these animals illegal until their numbers returned to healthy levels. This would permit hunting and trapping the game without harming the overall population. Taking the surplus population of game animals has proved to be a wise and important tool for wild-life management.

Hunters were allowed to hunt or fish for animals with higher population levels under strict controls. The laws included open and closed seasons to insure that only surplus game was harvested. Bag limits, or the number of animals that can be legally taken in a single day or season, also helped to make sure that only surplus fish and game were taken.

In 1913, hunting licenses were first required for Ohio residents. This money was used to fund Ohio's wildlife management and wildlife law enforcement programs, and this is still the primary source of funding for wildlife programs.

The Birth Of Wildlife Management

Wildlife management is "The art of making land produce and sustain an annual crop of wild game for recreational use and wildlife viewing." Wildlife management began to grow as a

profession in the early 1920s. The first wildlife managers established hunting regulations and propagated animals. **Propagation** means to raise fish or wildlife in captivity.

As wildlife management grew, common and widely accepted values were established. Research and experimentation led to different management methods that benefited wildlife.

It became obvious to wildlife management pioneers that good habitat was necessary for healthy wildlife populations. Changing the land to a healthy habitat was the key to encourage wildlife species to return to Ohio. They knew that Ohio needed a good supply of the four habitat factors to benefit wildlife.

The four habitat factors are food, water, cover, and space. If any of these are missing or are in short supply, it becomes a limiting factor to healthy wildlife populations. A *limiting factor* is any harmful element such as disease, bad weather, or poor habitat that may cause wildlife populations to be limited. A task of wildlife managers is to reduce a wild animal's limiting factors.

All wildlife species need to be managed according to their own habitat needs. A wildlife









DID YOU KNOW?

- Division of Wildlife private lands biologists work with private landowners to improve wildlife habitat.
- Ninety-five percent of the land in Ohio is privately owned.
- Wildlife managers work hard to provide excellent habitat on Division of Wildlifeowned lands.
- The Division of Wildlife's wildlife management professionals track, survey, and perform research projects on both wildlife species and the habitat where they thrive.
- The ODNR Division of Wildlife owns more than 165,000 acres of public hunting and fishing grounds.
- Wetlands are home to more wildlife species than any other habitat type. More than 16,000 acres have been restored or enhanced by the Division of Wildlife since 1990.

manager must be familiar with the habitat needs of each wildlife species to create the right management plan. For example, a cottontail rabbit eats mostly grasses, clover, and other plants and needs brushy cover for shelter. A squirrel eats mainly nuts and seeds and needs woodlands for shelter. Foxes need holes for shelter and eat mostly mice and small rodents.

Conservation vs. Preservation

One key wildlife management principle is that wildlife can be used and will replace itself. A natural resource that can be replaced or replenished and available for continued use such as animals, trees, and other plants is a renewable resource. A non-renewable resource is one that can't be replaced after it is used such as coal, oil, or natural gas.

Because it cannot be replaced, we may stop using a nonrenewable resource in order to keep it from being eliminated. *No use of a resource* is called **preservation**. A renewable resource may also be protected for a time if the levels of the population are too low to be hunted or trapped and replaced naturally.

However, because wildlife is a renewable resource, we may hunt or trap it responsibly without harming the resource. *The wise use of our resources* is called **conservation**. It is wise to use a resource that renews itself to control populations and diseases, and protect habitat.

Wild animals have a tremendous ability to reproduce (give birth) and increase their numbers. For example, each spring many wild animals breed and give birth to their young. Often, the population becomes greater than the carrying capacity of the habitat. Carrying capacity is the number of each wildlife species that can live within a certain area and remain healthy and not damage the habitat.

A good way to understand carrying capacity is to imagine putting too many people in a canoe. The canoe has a weight capacity in order to stay afloat. If too many people are piled in the canoe, it will sink. Likewise, if the wildlife carrying capacity of a certain habitat is exceeded, the wild animals and the habitat will suffer. The excess wildlife will likely suffer from disease, stress, or die of starvation. The vegetation of the habitat can be seriously damaged or depleted.

The wildlife manager's task is to help maintain the populations of wild animals at or below the carrying capacity so that no damage is done to the animals' habitat.

Leaving nature to take care of excess wildlife is often cruel and irresponsible. Man has dramatically altered the original landscape. Most of the predators that helped control wildlife populations naturally have been eliminated from Ohio. *Predators* are animals that hunt and eat other animals, such as bobcats, wolves, and mountain lions. *Prey* is the animal that is hunted and eaten by predators.

Without these natural predators, it is necessary for wildlife professionals to use management practices and conservation to ensure healthy wildlife populations. Nature alone is no longer capable of maintaining populations at healthy levels in today's world.

The Role of Hunting and Trapping

An effective tool that helps wildlife managers keep wildlife populations at desired levels is controlled sport hunting or trapping seasons. These seasons allow hunters to kill a certain number of game animals each year. <u>Game</u> is wildlife that may be hunted or

trapped according to legal seasons and limits.

Sport hunting is a legal recreational activity involving the pursuit of wild animals. Controlled sport hunting and trapping are used to remove excess animals without damaging the overall population. Sport hunting and trapping also provide needed funding through the sale of licenses for wildlife management programs. Poaching is an illegal activity involving the pursuit of any wild animal. No one should tolerate any form of poaching.

In addition to license-fee money, a tax is collected on hunting and trapping supplies. This tax came from the Pittman – Robertson Act. This act is named after two U.S. Congressmen who sponsored a bill in 1937 that placed a tax on firearms, ammunition, and related hunting gear. Money from the tax is issued to each state for wildlife management and other wildlife programs. Every time a hunter buys hunting equipment, a portion of the money will eventually pay for wildlife programs.





Pittman-Robertson Act

- Actually called the Federal Aid in Wildlife Restoration Act, P-R was sponsored by Senator Key Pittman (Nevada) and Representative A. Willis Robertson (Virginia). President Franklin Delano Roosevelt signed it into law in 1937.
- It provides an excise tax on firearms, ammunition, and archery equipment.
- P-R money is available to the states to buy, develop, maintain, and operate wildlife management areas.
- P-R money is available to the states and is used for surveys and research necessary to restore wildlife.
- P-R money is available to the states and is used to finance Hunter Education programs. These programs reach about 650,000 people a year.
- People who never hunt benefit from P-R too. Wildlife management areas and wetlands are useful to all nature lovers and watchers. Funds go towards management of all species, game and nongame alike.

Wildlife Management Success Stories

Since the Ohio Fish Commission first began its work in 1873, numerous fish and wildlife species have returned to healthy levels. The wild turkey, white—tailed deer, ducks and geese, river otters, bald eagles, bluebirds, osprey, and many others made a successful comeback as a result of wise use and management of wildlife and habitat.

For example, wild turkeys were trapped in other states and released in Ohio during the late 1950s. As a result, a species once totally eliminated from Ohio reached a population of 200,000 by the year 2000. There were only four breeding pairs of bald eagles in Ohio in 1979. By the year 2000, 63 nesting pairs had been established. In 2000, the white-tailed deer herd was estimated to be at 550,000 after being eliminated from Ohio 100 years earlier.

Thanks to the work of wildlife managers, Ohio is nationally recognized for its trophy bucks and large deer herd. Lake Erie is now known as the "Walleye Capital of the World" and as one of the world's best smallmouth bass fisheries.

LOSS OF PRIVATE HUNTING LAND OF CONCERN TO OHIO SPORTSMEN AND WOMEN

In the state of Ohio some wildlife species have been eliminated from certain areas due to a loss of habitat. This reduction of habitat causes concern for sportsmen in other ways. The increased urbanization of our rural areas results in less access to suitable hunting land. As houses devour a landscape that was once predominantly farmland, much of this acreage is no longer available for hunting. Safety concerns with houses, businesses, and roads have resulted in the remaining areas to be closed. These concerns create problems on other huntable areas as well.

The remaining private land receives more pressure from sportsmen and women because they have been forced to find other areas in which to pursue hunting or shooting sports. As a result, many landowners no longer allow hunting because of the increased demand for hunting privileges on their limited land.

Sportsmen and women can help curb this problem by becoming involved in land use issues in their communities. They might also consider joining an organization like the Ohio Izaak Walton League. They are working to protect our rural landscape so that there will always be a place to enjoy our outdoor pursuits. The Ohio Izaak Walton League can be contacted at (419)-465-2283.

Did you know that between 1992 & 1997:

- 829,000 acres of farmland were developed for other uses.
- 10,000 farms comprising 1.1 million acres are no longer in agricultural production.
- 65,000 acres of farmland were lost each year on average.

Information taken from *Protecting Open Space Heritage in Ohio* (POHIO) brochure, an Izaak Walton League publication.

	÷		

Focus: A white-tailed deer is successfully adapted to escape predators and to survive northern winters.

ACTIVITIES	MATERIALS	
Initial Question: What special adaptations does a white-tailed deer have to help it survive?		
MEET A DEER		
Objective: To introduce the adaptations and life cycle of the white-tailed deer.	• pictures or slides	
Using pictures or slides, introduce the special adaptations and the life cycle of a deer.		
Note: State Fish and Wildlife Departments, which manage deer herds in their states, may have slides to loan.		
SHOW AND TELL		
Objective: To give the children a chance to look closely at certain deer adaptations.	a deer skull, hoof, hair, and antlers	
Divide the children into four groups. Give each group one of the deer parts and have the children investigate it closely and think about how this part is a useful adaptation. Then pass the part on to the next group. Once each group has its original part back again, have each group present its object to the others, telling about its adaptations and uses.	• hand lenses	
Note: Deer hunters, Fish and Wildlife Departments, or private collectors are usually willing to lend deer parts.		
POPULATION PUZZLE		
Objective: To illustrate the problems of over-population in an area of limited food supply, such as a deer yard. Show the minimum amount of actual food (2½ pounds of browse) needed each day by each deer to remain alive. Divide participants into groups of twos, threes, and fours. Give each group a pile of 8 pretzels. Explain that each person needs a minimum of one pretzel per day to remain alive. Each pile is to last the group for three days. Then announce Day 1, Day 2, Day 3, pausing between each for the children to eat their pretzels, or, if none remain, to collapse of starvation. At the end, compare survival roles. Discuss whether deer are polite the way people tend to be, which deer eat first, which deer starve first. Is there adequate winter habitat for deer in your state?	 2½ pounds of deer browse (enough twigs to fill a grocery bag) pretzel sticks divided into piles of 8 	

ACTIVITIES

MATERIALS

EAT AND RUN

Objective: To show the dilemma deer face when they must browse for many hours daily yet also be on the alert for danger.

Ask each child to kneel down. Put a piece of paper with cereal on it in front of each. Tell the children that they are deer, grazing in an open field. They should put their heads down like deer and eat. Appoint one deer to walk among them and act as a lookout. When it senses danger (leader could flash a picture of a predator), the lookout deer raises his white tail flag, and the feeding deer must stop eating and flee to SAFETY (designated spot with SAFETY sign on it). Another child then becomes the lookout. After they have tried it, discuss how deer are better adapted to be aware of potential danger, and why it is advantageous for the deer to be a ruminant. (See information, p. 30)

- · papers
- cereal
- SAFETY sign
- Whiteflag (made to look like a deer's tail)

ROOM AND BOARD

Objective: To learn what makes a suitable winter habitat for deer.

Divide the children into groups of three and give each group their Room and Board cards with the following instructions:

FOOD

You must find some shrubs and trees that you can reach when on your knees.

PATHS

Tramp down paths both to and fro so deer can follow through the snow.

Where to sleep or where to rest? A wind-free, sheltered place is best.

The groups then spread out within a given area, and each should find a good place to winter as deer, deciding together which place is most suitable for Food, Paths, and Beds. Get back together to discuss the various winter habitats found.

 Room and Board packets with one card each for Food, Paths, Beds

WHITE-TAILED DEER Facts

THE SKULL

Eyes

Are a deer's eyes large or small and why?

A deer's large eyes are sensitive to even tiny movements, but don't notice objects that don't move: This excellent eyesight is important for spotting danger.

Why is there a bony framework around the eyes?

To protect them from sticks and branches that could hurt the eyes, as the deer runs through the forest.

What are the openings on the front rim of the eye socket?

These are tear ducts, for the tears that are important in washing dust, pollen, or other particles out of the deer's eyes.

Jaw

Where are the teeth missing?

The deer's upper jaw is missing its front teeth. Live deer would have a hard pad there. The back rows of teeth are used for chewing and grinding their food.

How might the teeth indicate the age of a deer?

Very worn and smooth teeth would indicate that the jaw or skull belonged to an older deer, whereas rougher, sharp-edged teeth would show the deer was younger.

Ears

Where are the openings for the ears?

The opening is funnel-shaped and surprisingly small, up and behind the eye socket.

Are the deer's ears large or small?

The large ear we see is an excellent funnel to collect even the slightest sound and send it through the small opening to the ear drum. Kidney-shaped bones on the underside of the skull act as sound chambers.

THE ANTLERS

Sex of the Deer

Do all deer grow antlers?

It is usually the male deer (buck) that grows antlers, though occasionally a female (doe) will grow them.

What are the antlers used for?

The bucks use the antlers during the rutting, or breeding, season to defend their territories and their does against other bucks and/or to challenge a rival buck for a doe.

Formation

What are antlers made of?

Antlers, which grow and are shed every year, are made of bone and grow right from the skull bone. Horns, which look like antlers, are permanent and are made from a hair-like substance over a bony core.

What do the antlers look like while they are growing?

Each year the antiers start growing as little "buttons" on the skull, three or four months after the old pair falls off in January. They then grow to their full size covered with "velvet."

What does the velvet do?

This velvet, or fuzzy, coating on the antlers is really skin and is filled with blood vessels, which provide nutrients for the growing antlers. While the antlers are covered with velvet they are very sensitive and can easily be hurt and damaged. When they have finished growing, the deer rubs them against trees and shrubs and scrapes the dried velvet skin off in shreds.

Size

What does the size of a deer's antlers show about the deer?

The size indicates how healthy the deer is and whether or not it has had enough nutritious food to eat. Ill-nourished deer have smaller antiers than well-nourished deer of the same age. Thus a buck's age, other than a single-spiked yearling, cannot be determined by its antiers.

Shedding

When and how do deer lose their antlers?

They may be knocked off prematurely, but normally they fall off in early winter.

Antlers are rarely found in the woods. Where do they disappear to?

Deer antlers are recycled. Animals, like mice, squirrels, and porcupines, like to chew on the antlers, which have calcium and other minerals the rodents need.

THE HAIR

Color

Why is the gray color of the winter coat an advantage?

The reddish-brown summer hair would show up in leafless winter woods more easily than the gray hair, which is a good camouflage color against the bare tree trunks.

Where does a deer have white hair?

White hairs are found on the underside of the tail, in a bib on the throat, inside the legs, and on the lower chest and belly.

Texture

Is there a difference in texture between the summer coat and the winter coat?

Summer hairs are solid, fine, and short to help the deer stay cool. Winter hairs are long, coarse, wavy, and hollow. In addition, short, fuzzy underfur helps insulate. A winter hair bends like straw, leaving a crinkle mark.

Warmth

How would hollow hairs benefit a deer in winter?

Long, hollow hairs trap much more body heat than short, fine hairs. Dead air spaces within and between the hairs provide excellent insulation even in the coldest weather.

HOOVES

Shape

How is the hoof shaped?

The hoof is divided into two separate halves. Each half is actually a toe. These two toes were once the third and fourth toes on the foot of ancient deer relatives. The first toe or thumb disappeared, and the second and fifth toes are now the dew claws. The deer hoof is far less clumsy than its 5-toed predecessor.

Where are the dew claws? How might they help the deer?

These two toenail remnants, which are behind and slightly above the main toes, occasionally leave round dents behind the main hoof imprints in a deer track. They could help keep a deer's foot from slipping or getting caught in a crack.

Advantages

What are some possible advantages and disadvantages of hooves for the deer?

Small hooves enable the deer to bound surefootedly over tangled, uneven terrain. But in winter, the small hooves can be a disadvantage, easily breaking through snow or ice crusts, because the deer's weight presses down so hard on each tiny hoof. It is similar to a person wearing skis who can stay on top of the snow because his weight is distributed along the ski, but who without skis would sink into the snow.

Structure

How is the sole of the hoof different from the outer covering?

Soft, leathery pads (dried up on a specimen) fit into the hard frame of the hoof.

How would these pads help or harm the deer?

The pads help keep the deer from slipping when it walks over rocks and ledges.

How might the hard outer covering help the deer?

The covering of the hoof is made of keratin, like fingernails. It cuts into the earth to give sturdy footing. It also makes the hoof a dangerous weapon — one sharp blow from a deer's forefoot can crush a dog's skull. In winter it can be slippery, making it almost impossible for a deer to get up after it has fallen on the ice.

FOLLOW-UP ACTIVITIES

1. Storytime

Read the children the story "Lightfoot, Blacktail, and Forkhorn" from The Burgess Animal Book for Children by Thornton W. Burgess. (New York: Grosset & Dunlap) ISBN # 1588272111

2. Resources

Invite a Game Warden into the school to talk about the deer population.

3. Personal Experiences

Have the children talk with someone who has watched deer and write about that person's experience. If the children have seen deer, they should write about their own observations.

Skills

Science Process: Observing, Inferring, Brainstorming, Communicating, Predicting Integrated Curriculum: Drama, Social Studies, Reading, Writing, Language Arts, Math

Suggested Reading for Children:

Eberle, Irmengarde. Fawn in the Woods. New York: Crowell, 1962. (o — story format, good information)

George, Jean Craighead. The Moon of the Deer. New York: Crowell, 1969. (y)

Hurd, Edith T. The Mother Deer. Boston, MA: Little, Brown, 1972. (y — story format)

Jenkins, Marie M. Deer, Moose, Elk and Their Family. New York: Holiday House, 1979. (adaptations, life cycles)

Zoo Books 2. The Deer Family. (Vol. 1, #10). San Diego, CA: Wildlife Education Ltd., 1985. (o adaptations of many species)

DEER DAMAGE CONTROL



White-tailed deer have long been enjoyed for their grace and beauty and respected for their wiles and cunning by nearly everyone. Rare is the individual who has not had the opportunity to stare in wonder and amazement as a majestic whitetail seemed to materialize out of thin air, either walk nonchalantly or run with its flag waving through a field, only to disappear as mysteriously as it first appeared.

However, expanding deer populations throughout the state, as well as the nation, have resulted in concern about the deer's negative impacts on man's activities. Because of the nature of their operation, farmers, orchardists, and nursery operators have had to contend with the negative aspects of deer for a long time, but relatively low deer populations tended to keep damage problems at tolerable levels. After all, they tend to enjoy the sight of deer as much, if not more than, anyone else. But deer populations have grown and they have adapted to our presence. Furthermore, we are continuing to manipulate the deer's habitat to suit our needs (i.e., highways, shopping malls, housing developments, etc.). This can only result in greater interaction and problems in the future. This brochure provides landowners with the various currently available

options, besides the obvious one of including less desirable plants in their landscape arrangements (Tables 1 and 2), that they can incorporate into their management plans for reducing deer damage problems.

Deer Damage Control Options

Deer damage control options can generally be placed into one of the following categories: 1) a device or technique designed to scare intruders away; 2) some type of physical barrier to prevent entry; 3) chemical repellents; or 4) lethal measures. In determining which of these options best suits the needs of the person experiencing deer damage, one needs to consider the type, timing, and extent of damage, as well as the deer population in the area, availability of alternate deer foods and cover, the general characteristics of the site to be protected, and the material and labor costs of the various options. Obviously, where the pressure or amount of deer damage inflicted on the crop or planting is light, justifying costly or extremely laborintensive techniques is difficult unless the value of the crop warrants the expense. On the other hand, methods best suited to light damage will not be effective if deer pressure on the specific planting is heavy. Regardless of the technique used, one should bear in mind that control measures tend to be most successful when implemented prior to or during the onset of problems. Behavior modification is easiest to achieve before a habit or dependency develops. A discussion of the various options follows.

CONTROL METHODS

Scare Devices and Techniques

Probably the simplest and least expensive method for deterring deer would involve the use of streamers, flags, aluminum pie pans, or any other device or material that either moves in the breeze or throws a reflection when illuminated by a natural or artificial light. When deer pressure is light and alternate foods and cover are readily available, the motion or reflection that is produced may be sufficient to reduce damage to tolerable levels. However, deer quickly become accustomed to the disturbance that these devices produce. Unless one is willing to move these devices every two or three days within the area to be protected, their effectiveness drops rapidly. Additionally, still, moonless nights render this technique useless. One should consider this technique only if the period of damage is of short duration and the value of the plants being protected is minimal.



Propane cannon.

Propane cannons or exploders are another option available to property owners experiencing light to moderate deer damage. While considerably more expensive than streamers and reflectors, they are an affordable tool (approximately

\$350 and available through various mail order nursery, forestry, and agricultural supply dealers) that will last for years when given proper care. Most operate on an adjustable timer so that the frequency of discharge can be varied, and some rotate so that the sound appears to move around or originate from different locations. Additionally, they operate regardless of the weather and light conditions to more effectively scare deer and other wild-life from the area being protected. As with streamers, however, they do require attention

in that they must be moved periodically to remain effective. Despite their noise, wildlife will become accustomed to the disturbance, particularly if the disturbance is stationary. Frequency of equipment movement will vary depending on local conditions - type of crop being protected, rotating or stationary cannon, availability of alternate habitat, etc. - and is best determined by monitoring the crop for evidence of continued damage.

A relatively new and interesting scare technique involves the use of one or more guard dogs confined within the area to be protected by an electric wire buried just below the surface of the ground. This "invisible fence" operates like systems used by many homeowners desiring to keep the family pet in their yard. When the dog, which is wearing a receiver on its collar, approaches the wire, it first receives a warning sound. Further movement towards the wire results in the dog receiving a mild but attention grabbing electrical shock. To be effective, the dog must remain within the confines of the area needing protection during the time that protection is needed. This necessitates proper conditioning of the dog to the device. Costs for this protection will likely be higher than for other scare devices, but because the dog is mobile it is able to more effectively protect a larger area. Depending on the size of the area and the desirability of the crop being protected, more than one dog may be needed. Research evaluating a system manufactured and marketed by Off Limits® Crop Protection Systems (1-800-923-PEST) appears promising. Contact the company for additional information.

Physical Barriers

Properly constructed physical barriers, or fences, are intended to exclude deer from entering an area, thereby reducing damage to negligible levels. The vast variations in fence design, which are limited only by one's imagination, greatly influence their effectiveness in achieving this objective. Current fence designs vary from as simple as a single strand of electric wire to as elaborate as a woven, or livestock, wire fence eight feet or more

tall. Obviously, fence design has a tremendous impact on installation and maintenance costs, as well as its life expectancy.

For individuals desiring long-term protection of valuable crops such as a commercial orchard or nursery operation, the costs of an eight-foot woven wire fence may be justified. Fence construction involves setting 10- to 12-foot poles into the ground so that eight feet are above ground. Two courses of fourfoot woven wire are then stapled to the poles so that the effective height of the fence is eight feet. Since this fence has considerable weight, use of the longer poles on the corners and interspersed along the sides is advised. This fence is extremely effective in excluding deer, however it is also quite expensive to construct and maintain. For this reason, it should only be considered when the crop is valuable and deer pressure is high.

On the other hand, the average homeowner trying to protect a small family garden or orchard may be satisfied with the results of a single strand of electric wire to which strips of aluminum foil covered with a thin layer of peanut butter have been attached. The strips are attached at approximately threefoot intervals. The peanut butter serves as an enticement to the deer and the foil is an excellent conductor of electricity. The end result is that the deer receives a noticeable jolt to the nose or tongue. Rarely does a deer need more than one or two experiences like that to discourage it from visiting the area. This barrier is not as effective as the woven wire fence because the barrier consists of one strand of wire, about 30 inches off the ground. If the palatability of the crop inside the wire is greater than the peanut butter, a deer has only to jump the fence, thereby reducing the fence's effectiveness. It is, however, much more affordable and requires considerably less effort to install and maintain.

For those interested in fencing, but whose needs fall somewhere between an elaborate eight-foot fence and a simple, single electric line, there are a variety of options available. The three-wire two-dimensional fence (Fig. 1) involves the construction of two separate fences, one 38 inches inside the other. As with the single wire fence, this and all successive fences are electrified. Vertical posts are set 120 feet apart with wire spacers set on 30-foot intervals between the posts. The outer fence consists of two wires, one set 15 inches off the ground, the other 43 inches from the ground. The inner fence has a single strand of wire set 30 inches from the ground. The idea is that the depth of the two fences will discourage deer from jumping the fence as they are too close for deer to easily jump each fence separately without making contact with one of the fences, and far enough apart that the deer are not able to easily jump both at the same time. Like the single strand with peanut butter enticements, this fence tends to be most successful in reducing deer damage when the deer pressure is low to moderate and the needed period of protection is short.

Another design that has received considerable attention is the Penn State Five-Wire Fence (Fig. 2). With this design, the area is enclosed by five separate strands of wire.

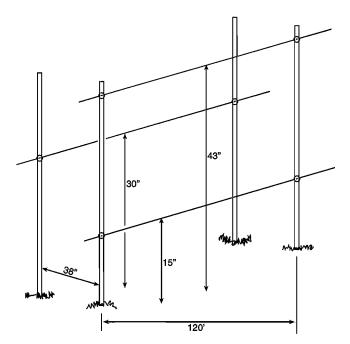


Fig. 1. Wire spacings for the 3-wire 2- dimensional fence are shown relative to the ground. Wire spacers every 30 feet help prevent wire sag.

The first wire is attached to a vertical pole at a height of 10 inches from the ground. Each successive wire is positioned 12 inches above the previous one. Total height on this fence is 58 inches. In an effort to provide additional security, some have added one or more additional wires. All wires are then moved closer so that the overall height remains the same. This is certainly acceptable, however reducing the number of electric strands while maintaining the same overall height, which is important, is not recommended as deer may be able to successfully squeeze through the larger openings.

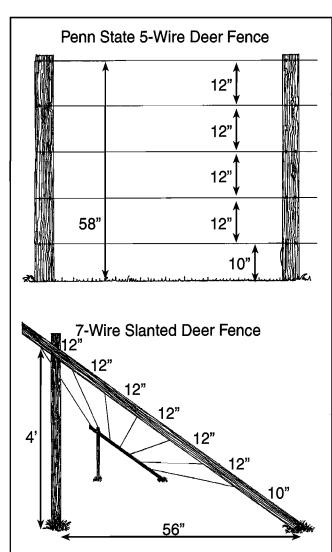


Fig. 2. Wires for the Penn State 5-wire Deer Fence (top) and the 7-wire Slanted Deer Fence (bottom) are located 10 inches from the ground for the bottom wire and then at 12-inch increments. Verticle posts are spaced 30 to 60 feet apart.

With the Slanted Deer Fence, the electric wires are attached to a slanted seven-foot rail which in turn is attached to a vertical post (Fig. 2). To construct this fence, vertical posts are placed no more than 60 feet apart. A rail is then attached to each post four feet from the ground so that the horizontal distance from the pole to the long end of the rail is 56 inches. The high side of the rail should be on the side furthest from the area being protected. At this point, the structure has the appearance of a right triangle with the rail serving as the hypotenuse. Wires are run from rail to rail with the first wire placed 10 inches from the ground end of the hypotenuse. Successive wires are spaced along the hypotenuse at one-foot intervals.

The last two fence designs described above and shown in Figure 2 have been used quite successfully to exclude deer from airports, where deer on the runway are an aviation hazard, and commercial orchards. Reported deer intrusions have been rare and have generally been the result of a power failure or a gate having been left open. All fences require maintenance to ensure that they continue to function satisfactorily, however annual maintenance costs after initial construction tend to be low and some have rather long life expectancies. Additionally, the more elaborate fences work well even where deer pressure is high.

Chemical Repellents

Chemical repellents, which are as varied as fence designs, act on a deer's senses of smell and taste to reduce, rather than eliminate, plant damage. Repellents range from homemade remedies such as soap, tankage, or human hair to commercially available preparations that impart a foul taste or odor to the crop. Exercise care when applying any odor or taste repellent to edible plants as it can render them unfit for human consumption if applied at the wrong time. Be certain to follow manufacturer's guidelines and established procedures closely. That warning aside, repellents can be an economical and effective technique for achieving dam-

age reduction, particularly if started before noticeable damage occurs. Chemical re-application is frequently needed during the growing season as any growth occurring after treatment is not protected. Additionally, rain often removes the residual repellent from the plant, thereby leaving it unprotected.

Where deer pressure is light, individuals may receive satisfactory results by hanging bags of human hair, particularly if fragrant additives such as cologne or after shave lotion have been included, from trees or stakes around and within the area to be treated. Bags of tankage and bars of soap have also been used with varying degrees of success. Heavier deer pressure typically requires the use of stronger medicine to achieve satisfactory results. The products shown in Table 3 provide the reader with an idea of the products that are commercially available. It is not intended as an endorsement of any product to the exclusion of others on the market. Increased demand for products that reduce wildlife damage has resulted in a tremendous growth in the number of products available. Home and garden centers, as well as agricultural and supply businesses that handle seed and fertilizer, frequently carry a wide assortment of chemical repellents. Sales representatives should be capable of recommending a product that properly meets one's needs.

Lethal Measures

The Division of Wildlife recognizes the value of hunting as an important management tool and advocates its use wherever possible. Property owners, especially those in prime deer habitat, should anticipate the possibility of damage and utilize hunting, where possible, as a preventative management technique that permits the wise and responsible use of the deer resource and reduces the potential for future problems. To provide for an increased harvest in areas where deer are a problem, the Division provides landowners with permits allowing for the harvest of additional deer during any of the regular deer seasons. In many problem

situations, the harvest of a relatively few deer, in addition to the regular harvest, reduces the population to a level that allows for sufficient deer for people to see and enjoy while reducing crop depredation to tolerable levels, particularly when other damage reduction techniques are utilized.

When other techniques are ineffective or impractical and the need to remove deer is urgent, the Division has a program that permits the lethal removal of deer from the problem area. After an examination of the situation, the wildlife officer may issue a permit that allows for the out-of-season culling of a limited number of deer. Landowners experiencing crop damage should consult with their county wildlife officer or contact the nearest district office for assistance.



Wildlife District One 1500 Dublin Road Columbus, Ohio 43215 (614) 644-3925

Wildlife District Two 952 Lima Ave. Findlay, Ohio 45840 (419) 424-5000

Wildlife District Three 912 Portage Lakes Drive Akron, Ohio 44319 (330) 644-2293 Wildlife District 4 360 East State Street Athens, Ohio 45701 (740) 594-2211

Wildlife District Five 1076 Old Springfield Pike Xenia, Ohio 45385 (937) 372-9261

Table 1. A Guide for Annuals, Biennials, Perennials, Groundcovers and Vines Damaged by Deer (courtesy of Cornell Cooperative Extension, Westchester County, New York).

PLANTS RARELY OR N. Annuals and Biennials	EVER EATEN	BOTANICAL NAME Coreospsis spp	COMMON NAME Coreopsis	BOTANICAL NAME Stachys byzantina	
BOTANICAL NAME	COMMON NAME	Dennstaedtia punctilobula		Thelypteris noveboracensis	
Ageratum houstonaianum		Dianthus spp	•	Tanacetum spp Verbascum spp	
Antirrhinum majus		Dicentra exima		Veronica latifolia	
Begonia x semperflorenscultorum		Dictamnus albus	•	Vinca major	
Cleome hasslerana		Echinacea purpurea		Viola labridorica	
Dahlia spp		Echinops spp	-	Yucca spp	
Datura spp		Erica spp.		14444 SPP	24004
Digitalis spp.		Eupatorium spp		Perennial Groundcovers	ì
Gaillardia pulchella	-	Euphorbia spp	•	BOTANICAL NAME	COMMON NAM
Heliotropium arborecens		Filipendula spp	• -	Aegopodium podagraria	•
Hypoestes phyllostachya	•	Fritallaria imperialis		Ajuga reptans	-
Ipomoea spp		Geum spp.	•	Asperula oderata	
		Gypsophila paniculata		Convallaria majalis	
Lobelia erinus	• •		•	Epimedium spp.	
Lobularia maritima	•	Helleborus spp.			
Mirabalis jalapa		Iberis sepervirens	•	Lamium spp	
Myosotis sylvatica	•	Kirengeshoma palmata	-	Pachysandra terminalis	
Ocimum basilicum		Lavandula spp		Vinca minor	Periwinkle
Papaver spp		Liatris spicata		Perennial Vines	
Pelargonium x hortorum		Lilium lancifolium		BOTANICAL NAME	COMMON NAM
Petroselinum crispum	•	Limonium latifolium		Celastrus spp	
Salvia farinacea		Linaria spp			
Senecio cineraria	•	Linum perenne		Clematis spp	
Silybum spp		Lupinus spp	-	Lonicera spp Wisteria spp	
Tagetes spp		Lythrum spp		тыста эрр.	Wisteria
Verbena x hybrida	. Verbena	Matteuccia struthiopteris		PLANTS OCCASIONA	LLVEATEN
		Mentha pulegium	Pennyroyal	Annuals and Biennials	EEI EAIEN
Herbaceous Perennials		Mentha spp	Mint	BOTANICAL NAME	COMMON NAM
BOTANICAL NAME	COMMON NAME	Mitchella repens	Partridgeberry		
Achillea spp	. Yarrow	Monarda didyma	Beebalm	Achimenes spp Helianthus annuus	
Allium schoenoprasum	. Chives	Myosotis scorpiodes	Forget-Me-Not		5411101161
Allium spp	. Ornamental Onion	Myrrhis odorata	Sweet Cicely	Herbaceous Perennials	& Perennial
Allium tuerosum	. Garlic Chives	Narcissus spp	Daffodil	Vines	
Alyssum saxatile	. Basket of Gold	Nepeta spp	Catmint	BOTANICAL NAME	COMMON NAM
Amsonia tabernaemontana	. Amsonia	Oenothera tetragona		Endymion spp	
Anemone spp	. Anemones	Oenothera spp	Evening Primrose	Geranium maculatum	Cranesbill
Angelica archangelica		Onoclea sensibilis	Sensitive Fern	Geranium	English Isra
Aquilegia canadensis	-	Origanum spp		Hedera helix Iris spp	English Ivy
Arisaema triphyllum		Osmunda cinnamomea		Paeonia spp.	
Artemisia spp.	-	Osmunda claytoniana		Rudbeckia spp.	
Aruncus dioicus		Osmunda regalis		Sedum purpureum 'Autumn Joy	
Asclepias tuberosa		Papaver orientale		Thalictrum spp	Meadow Rue
Astilbe spp.		Phalaris arundinacea 'Picta'	***	PLANTS OFTEN EATE	7167
Baptisia spp		Platycodon grandiflorus			LIN
		Polemonium caeruleum		Annuals and Biennials	001010111111
Bergenia spp				BOTANICAL NAME	COMMON NAM
Boltonia asteroides		Polystichum acrostichoides		Alcea rosea Impatiens spp	
Buddleia davidii	•	Potentilla spp.	-	Tithonia rotundifolia	
Calluna spp		Primula spp			
Campanula carpatica		Pulmonaria spp		Herbaceous Perennials	
Centaurea spp.	-	Ranunculus spp		BOTANICAL NAME	COMMON NAM
Ceratostigma plumbaginoides		Rheum spp		Crocus spp	
Chelone spp	. Turtlehead	Rosmarinus officinalis	Rosemary	Hemerocallis spp	
Chrysanthemum coccineum	. Painted Daisy	Salvia spp	Sage	Hosta spp	
Chrysanthemum x superbum		Saponaria spp		Lobelia cardinalis Phlox spp	
Chrysanthemum parthenium	. Feverfew	Scilla spp		Rosa spp	
		Solidago spp	~		

Table 2. A Guide to Trees, Shrubs, and Woody Plants Damaged by Deer (courtesy of Cornell Cooperative Extension, Westchester County, New York).

Plants Rarely Damaged ROTANICAL NAME COMMON NAME

BOTANICAL NAME	COMMON NAME
Berberis spp	Barberry
Berberis vulgaris	Common Barberry
Betula papyrifera	Paper Birch
Buxus sempervirens	Common Boxwood
Elaeagnus angustifolia	Russian Olive
Ilex opaca	American Holly
Leucothoe fontanesiana	Drooping Leucothoe
Picea pungens	Colorado Blue Spruce
Pieris japonica	Japanese Pieris

Plants Seldom Severely Damaged

BOTANICAL NAME	COMMON NAME
Betula pendula	European White Birch
Celastrus scandens	American Bittersweet
Cornus sericea	Red Osier Dogwood
Cornus florida	Flowering Dogwood
Cornus kousa	
Crataegus laevigata	English Hawthorn
Enkianthus campanulatus	Redvein Enkianthus
Fagus sylvatica	
Forsythia spp	Forsythia
Gleditsia triacanthos	Honey Locust
Ilex cornuta	Chinese Holly
Ilex glabra	Inkberry
Juniperus chinensis	Chinese Junipers (blue)
Juniperus chinensis	Chinese Junipers (green)
Kalmia latifolia	Mountain Laurel
Kolkwitzia amabilis	Beautybush
Picea abies	Norway Spruce
Picea glauca	White Spruce
Pinus nigra	
Pinus rigida	
Pinus mugo	Mugo Pine
Pinus resinosa	Red Pine
Pinus sylvestris	Scotch Pine
Prunus serrulata	Japanese Flowering
	Cherry
Salix matsudana tortuosa	Corkscrew Willow
Sassafras albidum	Common Sassafras
Syringa vulgaris	Common Lilac
Wisteria floribunda	

Plants Occasionally Severely Damaged

Plants Occasionally Se	verely Damaged
BOTANICAL NAME Abies concolor	COMMON NAME
Abies concolor	.White Fir
Acer griseum	.Paperbark Maple
Acer rubrum	•
BOTANICAL NAME	COMMON NAME
BOTANICAL NAME Acer saccharinum	.Silver Maple
Acer saccharum	.Sugar Maple
Aesculus hippocastanum	.Common Horsechestnut
Amelanchier arborea	
Amelanchier laevis	.Allegheny Serviceberry
Campsis radicans	
Chaenomeles speciosa	
	Quince
Cornus racemosa	
Cotinus coggygria	
Cotoneaster spp	Cranherry Cotonaggter
Cotoneaster horizontalis	
Cryptomeria japonica	
Forsythia (x) intermedia	Border Forsythia
Hamamelis virginiana	Common Witchhazel
Hibiscus syriacus	
Hydrangea arborescens	
Hydrangea anomala petiolaris	Climbing Hydrangea
Hydrangea paniculata	Panicle Hydrangea
Ilex crenata	
Ilex (x) meserveae	.China Girl/Boy Holly
Juniperus virginiana	.Eastern Redcedar
Larix decidua	.European Larch
Lonicera (x) heckrottii	.Goldflame Honeysuckle
Ligustrum spp	.Privet
Magnolia (x) soulangiana	Saucer Magnolia
Metasequoia glyptostroboides	.Dawn Redwood
Parthenocissus quinquefolia	
Philadelphije coronarije	
Philadelphus coronarius	
Pinus strobus	.Eastern White Pine
Pinus strobus Potentilla fruticosa	Eastern White Pine. Bush or Shrubbby
Pinus strobus Potentilla fruticosa	Eastern White Pine Bush or Shrubbby Cinquefoil
Pinus strobus	Eastern White Pine Bush or Shrubbby Cinquefoil Sweet Cherry
Pinus strobus	Eastern White Pine Bush or Shrubbby Cinquefoil Sweet Cherry Douglas Fir
Pinus strobus	Eastern White Pine Bush or Shrubbby Cinquefoil Sweet Cherry Douglas Fir Firethorn
Pinus strobus	Eastern White Pine Bush or Shrubbby Cinquefoil Sweet Cherry Douglas Fir Firethorn Bradford Callery Pear
Pinus strobus	Eastern White Pine Bush or Shrubbby Cinquefoil Sweet Cherry Douglas Fir Firethorn Bradford Callery Pear Common Pear
Pinus strobus	Eastern White Pine Bush or Shrubbby Cinquefoil Sweet Cherry Douglas Fir Firethorn Bradford Callery Pear Common Pear White Oak
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Plants Frequently Severely Damaged

BOTANICAL NAME	COMMON NAME
Abies balsamea	Balsam Fir
Abies fraseri	
Acer platanoides	Norway Maple
Cercis canadensis	
Chamaecyparis thyoides	Atlantic White Cedar
Clematis spp	
Cornus mas	Cornelian Dogwood
Euonymus alatus	Winged Euonymus
Euonymus fortunei	
Hedera helix	English Ivy
Malus spp	Apples
Prunus spp	Cherries
Prunus spp	
Rhododendron spp	Rhododendrons
Rhododendron spp	Evergreen Azaleas
Rhododendron catawbiense	
Rhododendron periclymenoides	Pinxterbloom Azalea
Rosa (x) hybrid	
Sorbus aucuparia	European Mountain Ash
Taxus spp	Yews
Taxus baccata	English Yew
Taxus brevifolia	Western or Pacific Yew
Taxus cuspidata	Japanese Yew
Taxus (x) media	English/Japanese Hybrid
	Yew
Thuja occidentalis	American Arborvitae
Thuja occidentalis	

Table 3. Sources of repellents for most agricultural products. (Check labels for specific use directions.)

Product	Manufacturer/ Distributor	Mode of Action	Active Ingredient	Application Method	Restrictions	Registered Use
Shot-Gun Deer and Rabbit Repellent®	Bonide Products, Inc. 2 Wurz Ave. Yorkville, NY 13495 (315) 736-8231	Taste	Thiram 11.0%	Spray/brush	For fruit trees, limit application to nonbearing or dormant stages.	Ornamental shrubs, trees, nursery stock, and fruit trees.
Bulb Saver®	Bonide Products, Inc. 2 Wurz Ave. Yorkville, NY 13495 (315) 736-8231	Taste	Thiram 11.0%	Dip	Do not use on edible tubers and bulbs.	Flower bulbs and tubers.
Plant Pro-Tec (Garlic) Units®	Plant Pro-Tec, Inc. P.O. Box 902 Palo Cedro, CA 96073 (800) 572-0055	Odor, and taste if repellent unit is eaten	Garlic and chili pepper	Repellent units can be attached to plants or fencing, or placed in ground.	None	Requires no registration.
Tree Guard®	Norteck	Taste	Bitrex 0.2%	Spray		Non-food crops
Deerbuster's Deer Repellent Spray 5®	Trident Enterprises 9735A Bethel Road Frederick, MD 21702	Taste	Putrescent egg solids 25% White pepper 1.9% Garlic oil 1.9%	Spray		Non-food crops
Hot Sauce Animal Repellent®	Miller Chemical and Fertilizer Corp. P.O. Box 333 Hanover, PA 17331 (717) 632-8921	Taste	Capsaicin 2.5%	Spray	Do not use on food crops after fruit appearance.	Ornamental trees and shrubs, fruit and nut trees, nursery stock; deer, rabbit, meadow and pine mice.
Deer-A-Way® Big Game Repellent®	Intagra, Inc. 8906 Wentworth Ave. S. Minneapolis, MN 55420 (612) 881-5535	Odor/taste	Putrescent whole egg solids 37%	Spray ready-to- apply powder	Apply to conifers and ornamental trees only.	Conifer seedlings (spray only); dormant ornamental shrubs (powder only).
Hinder® Deer and Rabbit Repellent	Pace International 1011 Western Ave. Suite 505 Seattle, WA 98104 (800) 247-8711	Taste/odor	Ammonia 1.5% Mixed rosin and fatty acids 13.0%			
Dr. T's Deer Blocker® (Deer, Rabbit, and Squirrel Repellent)	Nature Products P.O. Box 682 Pelham, GA 31799 (800) 299-8485	Taste/odor	Putrescent whole eggs 6.25% Capsaicin 0.0045% Garlic 0.005%			Approved for use on food crops, bulbs, and vegetable gardens.
Deer-Off®	Deer-Off 1492 High Ridge Road Stamford, CT 06903 (203) 968-8485	Taste/odor	Putrescent whole eggs 6.25% Capsaicin and related capsaicinoids 0.0045% Garlic 0.005%			Approved for use on edible crops, flowers, grass, bulbs, shrubs, plants, seedlings, and trees.
Gustafson 42-S® Repellent	Gustafson LLC 1400 Preston Road Suite 400 Plano, TX 75093	Taste	Thiram 42%	Spray, brush, or dip	Do not apply to fruit trees or other edible fruit that will bear within one year of application.	Fruit trees, shrubs, ornamentals, nursery stock.
Magic Circle® Rabbit Repellent	J.C. Erlich Chemical Co. 500 Spring Ridge Road Reading, PA 19612 (610) 372-9700	Taste	Thiram 20%	Spray	Do not use on plant parts that are to be used for food.	For use on lawns, trees, flowers, and shrubs. Product will not harm sensitive flowers, trees, and shrubs.
Repel® and Rabbit/Deer Repellent®	Farnam Companies, Inc. 301 West Osborn P.O. Box 34820 Phoenix, AZ 85067-4820 (602) 285-1660	Taste	Thiram	Spray	Do not use on edible crops.	Ornamentals, flowers, dormant fruit trees.





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For release: October 3, 2008

2007 Ohio deer-vehicle collisions on decline-Driver awareness remains critical

Ohio deer-vehicle crashes decreased 6.9 percent in 2007 but don't be fooled, warns state and insurance industry officials. Driver awareness of the risk of such collisions needs to be emphasized during the upcoming deer-breeding season, according to the Ohio Insurance Institute (OII), Ohio Department of Natural Resources (ODNR) Division of Wildlife, Ohio Department of Public Safety (ODPS) and Ohio State Highway Patrol (OSHP).

ODPS reports 26,304 deer-vehicle collisions in 2007, down 6.9 percent from the 28,240 crashes reported in 2006. There were 10 fatalities and 1,022 injuries caused by these crashes in Ohio last year. This compares to 12 fatalities and 1,024 injuries reported in 2006 and nine fatalities and 1,084 injuries reported in 2005.

The five counties with the highest number of reported deer-vehicle collisions in 2007 were Hamilton (705), Knox (619), Richland (571), Summit (547) and Delaware (540). Compared to 2006 figures, Knox and Delaware counties reported an increase while the other three counties reported a decrease in deer-vehicle collisions in 2007 (click here for county summary).

Counties reporting the fewest collisions in 2007 included Monroe (23), Carroll (52), Hocking (68), Harrison (69) and Vinton (71) counties. Of these, Hocking was the only county to report an increase.

Nationally, Ohio ranks among the top states for the number of registered motor vehicles, licensed drivers and miles driven, reports the OII. Each of these contributes to the number of deer-vehicle collisions. Last year, the number of registered vehicles in Ohio exceeded 12 million.

Most deer-vehicle collisions occur between October and January during deer-breeding season. Last November there were 5,850 collisions - the highest number for any month (click here for statistics by month). According to data from the Ohio Department of Public Safety and ODNR, peak hours occurred between 5 p.m. and 1 a.m. followed by 5 a.m. to 8 a.m. In 2007, 54 percent of these crashes occurred between 5 p.m. and 1 a.m. while 23 percent occurred in the early morning between 5 a.m. and 8 a.m. (click here for crashes by time of day).

State wildlife officials estimate Ohio's current deer population at 700,000, up from its 2007 herd estimate of 675,000. Ohio deer densities tend to be heavier in the east-central and southeast parts of the state.

Vehicle damage varies dramatically depending on the type of vehicle, its speed upon impact and what area of the vehicle is hit. According to the Insurance Information Institute (III), vehicle damage from deer collisions averages about \$3,000 per claim nationally. Crashes that include bodily injury could increase costs significantly. OII estimates Ohio auto damages approached \$78.9 million in 2007.

A study of 2007 accident frequency claims released by Erie Insurance last month finds that although overall deer-vehicle collision claims are down (based on company-specific data), Erie's Ohio claims averaged 7.3 claims per 1,000 insured vehicles, 1 percent higher than in 2006. According to Erie's deer claim frequency statistics for 2007, West Virginia is highest with 18 claims/1,000 vehicles; followed by New York (14/1,000); Pennsylvania and Virginia are tied at (12/1,000); Illinois (9.5/1,000), Indiana (7.4/1,000), followed by Ohio and Maryland which tied at 7.3 claims per 1,000 vehicles. Click here for Erie's 2007 claims frequency map by Ohio county

Most insurers cover these losses under the "other than collision" (comprehensive) portion of an auto insurance policy, less the deductible. OII officials note that insurers normally don't single out deervehicle collision losses in determining future premium adjustments. Such a collision alone should not affect future premiums.

- Drive with extreme caution, at or below the posted speed limit, in areas with deer-crossing signs.
- · Most crashes occur in the months of October through January, followed by May. Highest-risk periods are from sunset to midnight, followed by the hours shortly before and after sunrise.
- If you see one deer on or near a roadway, expect that others may follow. Slow down and be alert.
- After dark, use high beams when there is no opposing traffic. The high beams will illuminate the eyes of deer on or near a roadway and provide greater motorist reaction time. Don't rely solely on high beams to deter collisions.
- · Always wear a seat belt as required by state law and drive at a safe, sensible speed for conditions.

- Don't swerve your vehicle to avoid striking a deer. If a collision with a deer seems probable then hit it while maintaining full control of your vehicle. The alternative could be even worse.
- Stay alert. Deer are always unpredictable. They often dart out into traffic on busy highways in metropolitan areas.
- Report any deer-vehicle collisions to a local law enforcement agency (such as the Ohio State Highway Patrol) or a state wildlife officer within 24 hours.

OII is an association representing insurance companies and agent groups for Ohio's property/casualty industry. The ODNR Division of Wildlife regulates Ohio's fish and wildlife resources and ODPS protects the safety and security of Ohioans through eight divisions including the Ohio Highway Patrol.

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RESOURCES

- 2005-2007 Ohio deer-vehicle collisions by county
- 2007 Ohio deer-vehicle collisions by time and day
- Ohio Traffic Crash Facts 2007 Deer crashes by county & month
- 2004-2006 Ohio deer-vehicle collisions by county
- 2007 Erie Insurance study; Erie's claims frequency map for Ohio
- 2007 State Farm Insurance study (no Ohio info)
- 2006 State Farm study (includes Ohio info)

CONTACTS:

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- Central Ohio: Lindsay Deering, 614.644.3925
- Northwest Ohio: Tom Lavergne, 419.424.5000
- Northeast Ohio: Jamey Graham, 330.644.2293
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Lindsay M. Komlanc: 614.752.4325

Ohio State Highway Patrol

• Lt. Tony Bradshaw: 614.752.2792

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2005-2007 Ohio Deer Vehicle Collisions by County

			<u> </u>	Offic Deer
County	2005	2006	2007	% Change 2006-2007
Adams	251	259	233	-10.0
Allen	374	431	441	2.3
Ashland	442	443	364	-17.8
Ashtabula	375	405	285	-29.6
Athens	230	188	181	-3.7
Auglaize	238	252	275	9.1
Belmont	126	113	188	66.4
Brown	301	313	254	-18.8
Butler	507	504	456	-9.5
Carroll	90	88	52	-40.9
Champaign	120	149	150	0.7
Clark	185	191	207	8.4
Clermont	441	470	451	-4.0
Clinton	283	273	272	-0.4
Columbiana	334	405	312	-23.0
Coshocton	282	271	258	-4.8
Crawford	290	293	282	-3.8
Cuyahoga	478	473	400	-15.4
Darke	261	280	266	-5.0
Defiance	298	399	428	7.3
Delaware	567	515	540	4.9
Erie	299	329	326	-0.9
Fairfield	384	330	309	-6.4
Fayette	138	156	179	14.7
Franklin	532	505	494	-2.2
Fulton	219	304	265	-12.8
Gallia	232	193	137	-29.0
Geauga	405	406	370	-8.9
Greene	365	386	292	-24.4
Guernsey	336	340	316	-7.1
Hamilton	757	717	705	-1.7
Hancock	456	463	397	-14.3
Hardin	223	230	256	11.3
Harrison	146	77	69	-10.4
Henry	185	211	224	6.2
Highland	310	414	396	-4.3
Hocking	94	63	68	7.9
Holmes	374	349	284	-18.6
Huron	292	337	276	-18.1
Jackson	253	212_	297	40.1
Jefferson	236	193	147	-23.8
Knox	590	602	619	2.8
Lake	282	273	226	-17.2
Lawrence	111	108	137	26.9

County	2005	2006	2007	2006-2007
Licking	345	343	306	-10.8
Logan	492	443	318	-28.2
Lorain	483	505	500	-1.0
Lucas	291	414	354	-14.5
Madison	114	136	92	-32.4
Mahoning	440	500	532	6.4
Marion	277	280	242	-13.6
Medina	400	414	352	-15.0
Meigs	172	129	75	-41.9
Mercer	168	170	196	15.3
Miami	343	323	358	10.8
Monroe	27	31	23	-25.8
Montgomery	364	376	295	-21.5
Morgan	127	132	95	-28.0
Morrow	340	342	313	-8.5
Muskingum	558	560	519	-7.3
Noble	180	220	149	-32.3
Ottawa	182	203	227	11.8
Paulding	139	180	188	4.4
Perry	151	121	102	-15.7
Pickaway	285	292	266	-8.9
Pike	110	131	149	13.7
Portage	439	407	432	6.1
Preble	172	176	153	-13.1
Putnam	147	161	143	-11.2
Richland	683	686	571	-16.8
Ross	444	489	457	-6.5
Sandusky	304	354	326	-7.9
Scioto	201	311	273	-12.2
Seneca	335	368	305	-17.1
Shelby	314	357	340	-4.8
Stark	472	455	495	8.8
Summit	623	629	547	-13.0
Trumbull	395	429	443	3.3
Tuscarawas	508	506	447	<u>-1</u> 1.7
Union	293	333	307	-7.8
Van Wert	173	188	152	-19.1
Vinton	92	79	71	-10.1
Warren	406	426	420	-1.4
Washington	286	273	200	-26.7
Wayne	340	247	269	8.9
Williams	432	485	517	6.6
Wood	336	427	412	-3.5
Wyandot	262	296	289	-2.4
STATEWIDE	27,337	28,240	26,304	-6.9

% Change

Source: Ohio Department of Public Safety

Ohio Traffic Crash Facts 2007

Unit Statistics - Table 7.03

Deer Crashes by County and Month

01/01/2007	To Date 12/31/2007	County(s) All Counties	
From Date 01/01/2007	To Date	County(s)	

Total	233	144	364	285	181	275	188	254	456	52	150	207	451	272	312	258	282	400	266	428
Dec	18	26	40	31	21	28	16	78	43	က	16	19	42	27	32	53	21	41	38	48
Nov	31	107	2	02	43	99	88	51	82	8	39	51	66	09	7	28	74	88	83	109
Oct	56	20	61	40	52	54	16	8	26	80	23	53	54	31	53	35	29	65	36	43
Sep	12	18	18	16	10	20	16	12	33	2	2	80	35	10	16	17	20	27	9	19
Aug	13	15	7	4	9	80	7	1	19	8.	. 2	2	17	10	7	7	9	20	6	8
Jul	14	Ξ	16	Ξ	4	80	00	13	20	2	က	7	27	14	13	17	17	15	13	7
Jun	14	18	28	23	12	10	13	12	27	4	7	16	30	21	4	Ξ	17	36	12	19
May	19	35	20	23	12	17	15	16	21	4	12	17	19	23	25	12	16	25.	10	31
Apr	22	23	25	12	19	1	13	15	16	0	80	17	32	19	16	2	6	20	16	25
Mar	22	53	17	18	7	15	6	20	52	9	10	10	24	18	20	21	7	23	22	35
Feb	12	35	25	Ξ	2	Ξ	15	19	43	9	13	13	19	15	17	15	Ξ	13	16	36
Jan	30	4	39	56	17	27	22	23	4	7	12	18	53	24	28	27	25	27	21	84
County	Adams	Allen	Ashland	Ashtabula	Athens	Auglaize	Belmont	Brown	Butler	Carroll	Champaign	Clark	Clermont	Clinton	Columbiana	Coshocton	Crawford	Cuyahoga	Darke	Defiance

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Unit Statistics - Table 7.03 Deer Crashes by County and Month

County	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Delaware	48	21	31	27	36	24	25	. 15	37	83	130	63	540
Erie	. 25	15	7	20	45	18	8		21	46	74	35	326
Fairfield	17	15	17	6	21	21	6	12	20	25	11	33	309
Fayette	14	-	9	80	12	13	14	9	10	32	47	12	179
Franklin	39	27	27	78	42	31	17	10	20	8	111	55	494
Fulton	13	်တ	12	21	36	17	=	Φ	15	46	53	24	265
Gallia	12	9	10.	e-	∞	10	5	7	14	20	30	12	137
Geauga	27	24	25	41	22	20	13	10	17	83	78	25	370
Greene	34	ω .	8	17	27	138	17	10	13	98	65	32	292
Guernsey	26	15	10	16	78	50	16	8	18	52	23	34	316
Hamilton	53	40	48	33	72	42	25	24	45	109	150	52	705
Hancock	33	19	22	18	40	12	16	80	20	51	101	25	397
Hardin	19	1	19	17	4	7	13	4	7	40	19	30	256
Harrison	9	က	9	80	2	က	7	2	4	6	တ	10	69
Henry	23	6	13	18	24	16	9	9	16	30	48	15	224
Highland	46	18	25	32	18	22	21	4	78	23	8	48	396
Hocking	8	_	9	4	2	9	0	-	က	Ξ	24	7	89
Holmes	25	23	25	12	တ	10	12	10	=	46	09	14	284
Huron	27	15	16	19	19	10	Ξ	∞	14	88	09	30	276
Jackson	. 25	10	17	15	4	25	2	10	17	45	79	19	297
Jefferson	10	7	8	က	4	80	တ	9	10	29	37	16	147
Knox	55	22	42	8	36	33	46	17	78	7	135	69	619
Lake	13	10	16	2	27	16	12	7	Ξ	4	52	16	226
Lawrence	7	10	O	r	11	14	9	4	4	18	56	13	137

Page 2 of 4



Unit Statistics - Table 7.03

Deer Crashes by County and Month

County	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
Licking	17	19	21	2	19	52	Ξ	7	16	. 46	78	. 26	30	306
	49	56	15	16	19	10	18	12	80	23	63	29	318	80
	4	31	52	19	8	19	20	6	33	103	115	51	20	200
	43	88	31	15	25	21	Ξ	80	48	53	89	23	38	354
Madison	7	ro	00	4	&	∞ .	2	-	-	13	20	15	3,	92
Mahoning	4	40	38	22	33	26	29	15	29	88	106	61	532	2
Marion	16	4	20	12	23	21		8	13	30	45	29	24	242
Medina	37	9	19	15	52	16	16	6	15	29	06	41	352	23
Meigs	6	co.	6	0	-	4	9	2	7	6	13	7	_	75
Mercer	16	ဖ	12	=	6	6	10	2	80	36	28	16	18	196
	59	56	23	21	33	15	10	7	23	43	. 75	53	36	358
Monroe	2	0	-	0	0	0	-	-	က	5	2	5		23
Montgomery	28	8	22	22	25	4	7	41	18	40	62	25	53	295
Morgan	6	တ	0	7	80	4	80	-	10	13	13	4	,	95
Morrow	23	18	1	16	27	19	13	6	16	39	8	41	31	313
Muskingum	42	22	45	17	51	29	19	24	37	9/	115	45	51	519
	6.	80	10	80	16	15	6	9	80	18	23	19	149	9
Ottawa	27	15	23	80	16	17	80	7	13	40	40	19	722	7
Paulding	12	9	16	=	14	80	2	80	16	22	41	25	22	188
	12	7	ω.	10	4	4	9	2	4	13	18	Ξ	7	102
Pickaway	23	11	13	21	14	16	С	10	15	40	4	24		566
	7	10	. 17	5	6	7	12	7	13	4	27	17	71	149
Portage	44	25	26	11	36	18	17	10	26	92	98	22	43	432
	12	4	18	2	6	6	6	5	12	21	30	19	*	153



Unit Statistics - Table 7.03

Deer Crashes by County and Month

County	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Putnam	8	7	9	12	80	12	4	9	6	22	38	11	143
Richland	51	46	29	37	32	20	17	13	26	72	157	71	571
Ross	47	24	45	21	28	24	21	16	30	49	86	39	457
Sandusky	29	23	25	4	26	23	13	7	14	14	74	33	326
Scioto	28	18	20	22	4	o	=	12	28	48	39	24	273
Seneca	24	15	15	18	20	13	10	6	18	39	78	46	305
Shelby	28	17	20	20	26	18	17	10	17	38	11	52	340
Stark	. 52	32	37	19	30	17	10	9	19	77	122	80	495
Summit	40	35	39	23	47	40	25	12	30	91	108	22	547
Trumbull	34	21	26	17	4	20	77	4	21	9/	88	64	443
Tuscarawas	32	25	36	23	35	18	4	15	16	82	102	49	447
Union	27	20	15	8	13	25	16	7	80	47	96	25	307
Van Wert	12	7	=	9	10	0	2	6	20	29	30	22	152
Vinton	6	4	က	2	2	4	2	8	6	13	14	e	7
Warren	42	28	27	21	27	21	24	16	16	26	26	48	420
Washington	Ξ	10	18	13	10	=	6	14	19	33	30	22	200
Wayne	16	15	21	12	21	£	14	9	18	40	72	23	269
Williams	44	22	38	32	40	32	19	17	31	72	107	63	517
Wood	8	13	23	19	44	31	12	13	24	83	92	44	412
Wyandot	28	14	18	22	22	16	16	80	16	47	54	28	289
State of Ohio	2,311	1,501	1,737	1,374	1,898	1,491	1,118	803	1,475	3,897	5,850	2,849	26,304

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Crash Statistics - Deer Related Deer Related Crashes by Time of Day

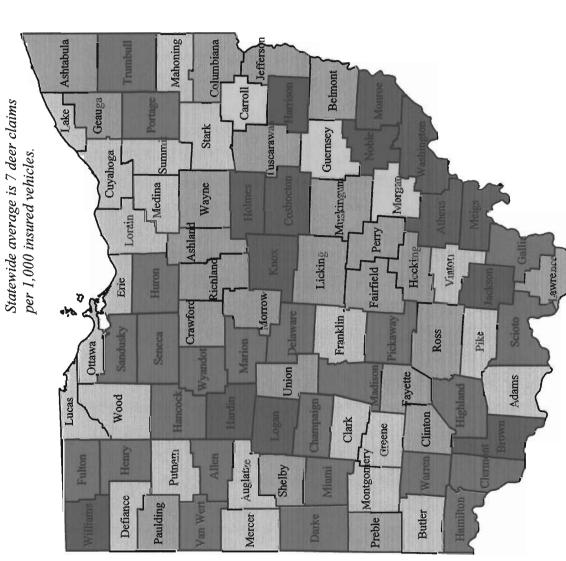
From Date 01/01/2007 To Date 12/31/2007 County(s) All Counties

Time	Fatal	Injury	Property Damage	Unknown	Total
12:00am - 12:59am	0	36	1,050	2	1,088
1:00am - 1:59am	. 1	31	731	0	763
2:00am - 2:59am	. 0	26	631	: 2	659
3:00am - 3:59am	0	19	623	3	64
4:00am - 4:59am	. 0	19	764	1	. 784
5:00am - 5:59am	. 0	61	1,697	3	1,761
6:00am - 6:59am	. 0	81	2,412	. 6.	2,499
7:00am - 7:59am	0	51	1,791	4	1,846
8:00am - 8:59am	0	34	587	2	623
9:00am - 9:59am	0	15	388	2	40
10:00am - 10:59am	1	16	317	1	33
11:00am - 11:59am	0	21.	304	. 0	32
12:00pm - 12:59pm	0	18	288	0	306
1:00pm - 1:59pm	0	10	205	1	210
2:00pm - 2:59pm	0	19	244	1	264
3:00pm - 3:59pm	. 0	24	279	3	300
4:00pm - 4:59pm	. 0	27	360	0	387
5:00pm - 5:59pm	0	41	1,229	2	1,272
6:00pm - 6:59pm	0	85	2,256	5	2,346
7:00pm - 7:59pm	2	70	2,122	4	2,198
8:00pm - 8:59pm	3	74	2,087	2	2,160
9:00pm - 9:59pm	2	91	2,144	3	2,24
10:00pm - 10:59pm	0	64	1,509	3	1,570
11:00pm - 11:59pm	1	58	1,246	3	1,30
Total	10	991	25,264	53	26,318

ERIE INSURANCE GROUP

OHIO PRIVATE PASSENGER AUTO

2007 Deer Claim Frequency by County Deer claims per 1,000 insured vehicles.



 Number of deer claims

 per 1,000 insured vehicles

 Less than 5

 6 to 10

 20 to 30

 30 to 40

 40 to 50

 More than 50

		,	

Part Two: Pro and Con: Consumptive and Nonconsumptive Uses of Wildlife



This section contains information on hunting deer in Ohio as well as various points of view on consumptive and non-consumptive uses of wildlife. This information can be used by teachers as background for the following activities or by students as research to conduct debates in class or for reports. It is intended to be a starting point for students to research, explore, critically think and develop their own opinions about the use of wildlife in Ohio. Use of factual information is necessary to develop an informed opinion about this much-debated topic.

Ohio's Popular Deer-Gun Season Is Open Statewide From December 1 Through December 7

Additional weekend of gun hunting for white-tailed deer on December 20-21

COLUMBUS, OH - Ohio's popular deer-gun season opens statewide on Monday, December 1, offering hunters a full week to harvest a whitetail. The upcoming season will again include an extra weekend of gun hunting on December 20-21, according to the Ohio Department of Natural Resources (ODNR) Division of Wildlife.

Deer can be legally hunted with a gun from one half-hour before sunrise to sunset through December 7 and during the extra designated weekend. With a pre-hunting season population estimate of 700,000 white-tailed deer, the Division of Wildlife anticipates 115,000 to 125,000 deer will be killed during the nine-day season. Approximately 400,000 hunters are expected to participate in this year's season, including many out-of-state hunters.

The white-tailed deer is the most popular game animal in Ohio, frequently pursued by generations of hunters. Ohio ranks 6th nationally in annual hunting-related sales and 4th in the number of jobs associated with the hunting-related industry. Each year, hunting has a \$1.5 billion economic impact in Ohio. Hunting related retail sales in Ohio total more than \$700 million.

Venison is delicious and nutritious meat, low in fat and cholesterol. It is the number one wild game served by hunters in Ohio. Deer hunters also contribute thousands of pounds of venison to organizations that help feed less-fortunate Ohioans through special programs.

Ohio is divided into three deer hunting zones. A limit of one deer may be taken in Zone A (20 counties). Hunters may take a second deer in Zone B (30 counties). A total of three deer may be harvested in eastern and southeastern Ohio's Zone C (38 counties). Any time a hunter is allowed to take more than one deer, they must purchase an additional permit. The antierless deer permit will be valid for deer-gun week only in Zone C. Hunters may purchase up to four antierless deer permits to take antierless deer within the designated urban deer zones located around Columbus, Cleveland, Akron, Youngstown, Toledo, Dayton, and Cincinnati. Antierless deer permits must be purchased by November 30.

Hunters may take only one antiered deer, regardless of zone, hunting method or season. Hunters can harvest no more than seven deer total during the 2008-09 season. A deer permit is required in addition to a valid Ohio hunting license.

Hunters are encouraged to kill more does this season using the reduced-priced antierless deer permit and donate any extra venison to organizations assisting Ohioans in need. The Division is collaborating with Farmers and Hunters Feeding the Hungry to help pay for the processing of donated venison. Hunters who give their deer to a food bank are not required to pay the processing cost as long as the deer are taken to a participating processor and funding for the effort lasts. Counties being served by this program can be found online at www.fhfh.org.

Additional hunting regulations and maps of the state's deer zones are contained in the 2008-2009 Ohio Hunting & Trapping Regulations. This free publication is available wherever hunting licenses are sold, online at wildohio.com or by calling 1-800-WILDLIFE.

GUERNSEY COUNTY LEADS THE STATE IN NUMBER OF DEER CHECKED ON OPENING DAY OF GUN SEASON

Written by:ODNR Division of Wildlife 11/26/2007 23:00:00

COLUMBUS, OH – Steady rains dampened the efforts of Ohio hunters on opening day of the 2007 deer-gun season. Hunters took 19,391 white-tailed deer on Monday, according to the Ohio Department of Natural Resources (ODNR) Division of Wildlife. The deer-gun season remains open through Sunday, December 2, and then reopens for two days on Saturday and Sunday, December 15-16.

GUERNSEY COUNTY LEADS THE STATE IN NUMBER OF DEER CHECKED ON OPENING DAY OF GUN SEASON Hunters take 19,391 deer statewide on Monday

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The preliminary figure from deer check stations throughout the state shows a decline from last year's opening day total of 39,629. Counties reporting the highest numbers of deer checked on Monday included Guernsey-871, Tuscarawas-833, Harrison-732, Coshocton-659, Athens-649, Holmes-621, Ashtabula-588, Noble-531, Licking-494 and Muskingum-471.

Hunters still have six days remaining in the gun week, plus the mid-December weekend, to fill a tag.

Deer hunting in the state is off to a great start this year, with both early archery and youth deer-gun season figures up from 2006. When combining the results of Monday's harvest, along with those from the early muzzleloader season, the first six-weeks of archery season and the recent youth deer-gun season, a preliminary total of 84,161 deer have been killed so far this deer hunting season. That number compares to 94,491 harvested last year at this time. In all, hunters took a total of 237,316 deer during all of last year's hunting seasons.

Approximately 400,000 hunters are expected to participate in the statewide deer-gun season. Ohio's deer population was estimated to be 675,000 prior to the start of the fall hunting seasons.

Hunters who wish to share their success can <u>submit a photo</u> of themselves and the deer they killed this year for publication on the ODNR Division of Wildlife's Web page.

Deer hunting contributes an estimated \$266 million to Ohio's economy each year and helps to support thousands of jobs. Venison is delicious and nutritious meat, low in fat and cholesterol. It is the number one wild game served by hunters in Ohio. Deer hunters also contribute thousands of pounds of venison to organizations that help feed less-fortunate Ohio residents through special programs.

A detailed listing of deer-hunting rules is contained in the 2007-2008 Ohio Hunting Regulations, available wherever licenses are sold, and online at www.wildohio.com.

PROVIDE THE FACTS

The more information you can provide on wildlife violations, the better the chances for an arrest. When observing a violation, make note of as many of the following items as possible.

	address:
Suspects:_	Name and address:

Weight:Age:	Hair:	
Description: Height:	Eye color:	Clothing:

distinguishing features:	
Scars, birthmarks or c	

Vehicle(s):	Make/model:	Year and color:

Style: pickup, sedan, SUV, etc.:_____

Distinguishing features of the car (dents, broken tail lights, etc.):

License number and state:

Violation, Description of what happened:

Specific location (town, county, lake, road, etc.):

Date and hour of violation:

SUPPORT THE PROGRAM

If you're concerned about protecting our state's wildlife resources for future generations, TIP needs your help.

Your tax-deductible donation will help support TIP's reward system and educational programs.



TIP supporters include clubs, businesses, and individuals who value our wildlife resource. What we have in common is our enjoyment of fish and wildlife. We want to continue enjoying them for years to come.

Poachers are stealing from all of us. Will you help?

Donations should be sent payable to: TIP, Inc. c/o Ohio Division of Wildlife, 2045 Morse Rd., Bldg. G-3, Columbus, OH 43229-6693.



RED STRICKLAND, GOVERNOR - SEAN D. ŁOGAN, DIRRC TOR - DAVID M. GRAHAM, CHIEF

ublication 355 (R107)









WHAT IS TIP?

In 1982, the Turn In a Poacher (TIP) program began, reducing poaching and other wildlife crimes throughout the state by involving the public in reporting wildlife crimes.

The TIP program is administered by the Ohio Division of Wildlife with support from TIP Inc., a committee of concerned Ohio citizens.

HOW YOU CAN HELP

Wildlife officers can't be everywhere at one time. You can be another set of eyes and ears. If you witness a poacher in action or have knowledge of a wildlife crime, call your local wildlife officer or the toll-free TIP line — at 1-800-POACHER (1-800-762-2437) and report it! TIP allows you to remain totally anonymous, even to the TIP trustees who pay the reward.

WHAT YOU NEED TO KNOW ABOUT POACHING

Many people think poachers are poor people just trying to feed their family. This is rarely true. Putting food on the table is seldom the reason for poaching. Some poachers do eat the meat, some give it away. Others sell it for profit, while others just shoot animals and leave them lay.

Poachers are thieves who have no respect for the wildlife resource. In reality, poaching is a danger not only for wildlife, but to the community at large. Often, poachers are the same people who shoot livestock and road signs or break into homes or vehicles to steal.

Poachers never follow the rules and laws that law-abiding hunters do. Poachers will use any method they can to steal wildlife. They use vehicles, spotlights, illegal nets or other devices—anything that will give them the meat, antlers, fur, or fish they pursue. Fair chase and following the law mean nothing to them.

WHY WILDLIFE LAW ENFORCEMENT IS ESSENTIAL

The goal of wildlife management is to produce healthy and stable wildlife resources. The illegal taking and removal of Ohio's threatened and endangered species along with the unreported harvest of species like deer and turkey make managing wildlife populations difficult. Wildlife management works best when supported by effective laws and their enforcement.

No matter how good a wildlife program may be, wildlife crimes will continue. The goal of the TIP program is to reduce the number of wildlife violations through communication with the public. With your assistance the Division of Wildlife and TIP are targeting poachers.

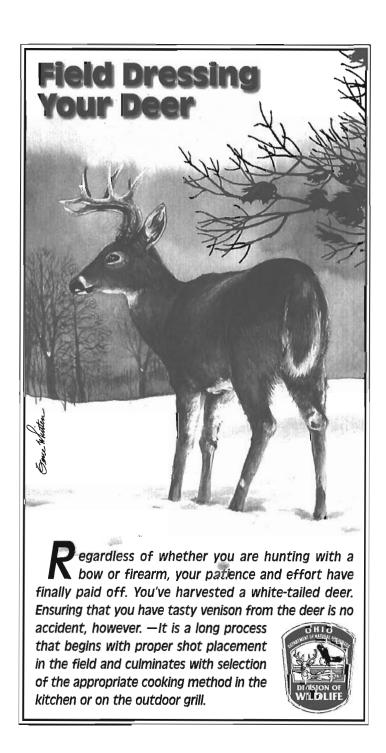
SERIOUS CRIMES DEMAND SERIOUS SOLUTIONS

Fish and wildlife are valuable natural resources. People who hunt and fish legally add millions of dollars to the economy of Ohio not only from the purchase of licenses and permits, but for equipment, fuel, charter trips, hotel stays, and other services. Additionally there are many people who enjoy wildlife through photography or by simply viewing it in its natural state. In short, wildlife adds to the state's economy and the quality of life of Ohioans.

REWARDS

People who destroy these resources illegally are thieves (criminals), no different from someone robbing your home. To help the Division of Wildlife reduce these crimes and bring violators to justice, the TIP program provides monetary rewards to those providing information that leads to the conviction of a poacher. Paying for information about crimes while keeping callers'identities confidential has proven successful in crime stopping efforts around the nation; other states also use similar programs to fight crimes against fish and wildlife.





Field Dressing Your Deer

♦ It begins with the shot.

Heat and contamination are the primary culprits responsible for meat deterioration and the "gamey" flavor that many associate with venison. Ensure that your shot is true and on the mark. By avoiding a prolonged chase of a wounded deer, you reduce the chances of chemical contamination caused by adrenaline and lactic acid buildup within the muscles. Additionally, a speedy recovery of the deer permits prompt field dressing, which helps reduce body heat.

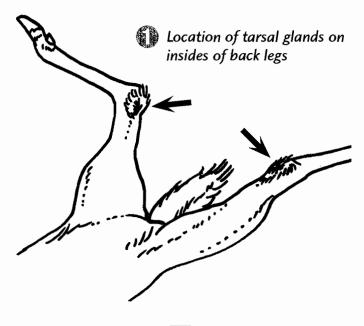
My deer is down, so what comes next?

Make sure that your deer is dead. Cautiously approach the animal from the back side. Using a small stick or weed from arm's length distance, gently touch the corner of your deer's eye. If the deer blinks, it is still alive and may require a final shot to ensure its humane death and your personal safety. More than one hunter has been injured by flailing hooves or antlers when a deer has been approached carelessly. After ensuring that your deer is dead, attach your temporary tag using string, wire, tape, or some other appropriate material that you will need to provide. Until this is done, your deer is not properly tagged, and you are subject to a citation.

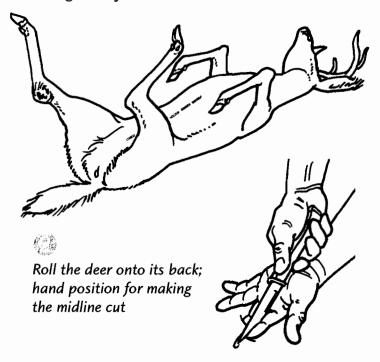
♦ Game Care 101

Regardless of its size, your deer is a trophy and should be treated as one. Locating and harvesting your quarry has been a challenge, but that effort is just the beginning of what you owe this prized game animal. Your efforts must now be directed toward preserving the quality of the meat by ensuring that your deer is properly field dressed.

Two popular misconceptions about field dressing deer involve sticking or cutting the animal's throat to ensure a complete bleed and removal of the tarsal glands **1** from the deer's back legs. Provided that you field dress your deer promptly, a five-minute job after a little practice, removal of the heart and lungs will do a better job than cutting the throat. Besides, your taxidermist, assuming that you are planning to have your trophy mounted, will have a difficult time repairing the damage from unnecessary holes. Removal of the tarsal glands is also unnecessary. Should you decide to remove the glands, however, use special care as contamination from the gland onto either your knife or hands can be easily transferred to the meat. Wearing protective rubber or disposable gloves as you field dress your deer will make your own clean-up quicker and easier and will reduce the possibility of exposure to disease.

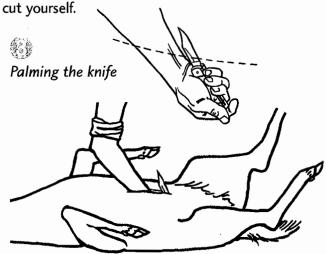


Start by rolling the deer onto its back. ② Using a sharp knife (most pocket knives will work fine), carefully cut a small opening at the base, or pelvis side, of the breast bone. This initial cut should only be large enough to permit you to insert your fingers into the incision. Using your free hand, either lift the skin or shove down on the stomach as you continue the cut along the deer's midline to a point approximately three inches beyond the navel. Avoid cutting into the stomach or intestines as doing so may contaminate the meat.



Another technique involves "palming" the knife so that the back side of the blade lies on top of the inside of your wrist and points back towards your forearm. The companies of the knife firmly and, through the initial incision, force your fist into the abdominal cavity between the skin

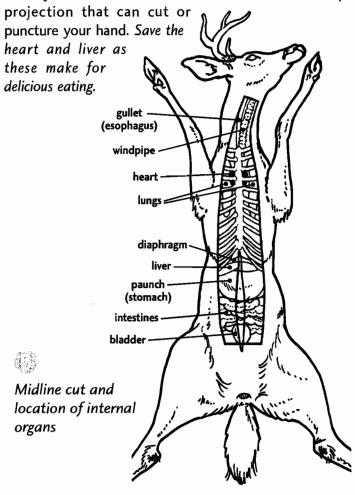
and the stomach. This technique allows you to cut from the inside out, thereby avoiding the stomach. However, extra care must be exercised to ensure that you do not



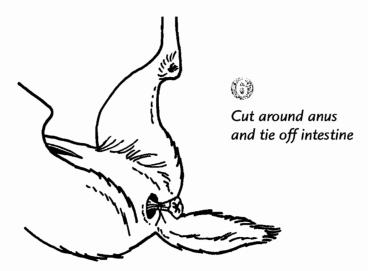
Regardless of the method used for making the incision, you will want an opening approximately 12-14 inches long through which the entrails can be extracted. Roll the deer onto its side and rake out the stomach, liver, and intestines, being careful not to puncture or tear the stomach. 4 You may need to use your knife to carefully separate the stomach and liver from their muscular attachments along the backbone, but at this point, everything will still be connected. Removing these "innards" will

allow access to the chest cavity.

Cut through the diaphragm, completely encircling the inside of the chest cavity. Reach into the chest with both hands and grab hold of the lungs with your free hand. Cut through the windpipe and esophagus, or as far forward as you can reach. This allows you to completely clean the chest cavity while achieving a thorough bleed. **Use caution when sticking your hands into your deer,** however, as there may be a broadhead from an earlier archery shot, a broken rib bone, or some other sharp



The only task left to field dressing your deer is removal of the bladder and remaining intestine. At this point, you might want to tie a string around the bladder and large intestine to prevent urine and manure contamination of the meat. 6 Make a shallow cut around the anus. Insert your finger into the incision and lift the large intestine out of the way as you use the knife to free the intestine and bladder from their connective tissue. A gentle pull on the bladder and intestine from inside the body cavity should allow you to remove these tissues, thus completing the field dressing procedure.



The biggest advantage of field dressing your deer through a small incision as opposed to a cut which extends from the base of the tail through the breast bone as some recommend is that the meat remains much cleaner because it has not been exposed to dirt, leaves, sticks, and other debris during the process of removing the deer from the field. Additionally, any cuts forward of the sternum make the job of mounting your trophy more difficult and expensive.

Back at the Barn

Cooling your deer is the next big challenge. If clean, cold water is available, rinse the body cavity well. This will remove any remaining blood as well as help reduce the deer's body heat. Prop the body cavity open with clean sticks and hang your deer in a shady spot until you can transport it to an official check station for permanent tagging. During transport, try to ensure that air is able to circulate around the deer rather than having it in a closed space that encourages heat build-up. Use bags of ice in the body cavity to help cool your deer if you are not able to process it in a timely manner. If you plan to take your deer to a commercial processor, your field dressing of the deer stops here. For those who intend to complete the butchering and processing of the deer themselves, the next step is skinning.

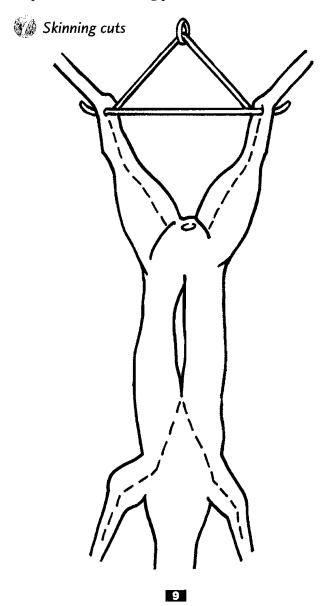
Skinning

Remember that a deer's hide is a tremendous insulator as evidenced by the fact that deer do not freeze to death during the winter despite bone chilling cold weather. Removing the hide as soon as possible will permit the meat to cool more rapidly. Make a cut from below the hock on each back leg to the mid-line between the legs. Skin and peel the hide from around the lower legs until the hock, with tendon intact, is exposed.

Once the deer is hung by its back legs, **slit the** hide on the front legs to the point at the base of the breast bone where you first inserted the knife during field dressing. Once this is done, the hide can, with a little help from your knife, be removed by pulling it free

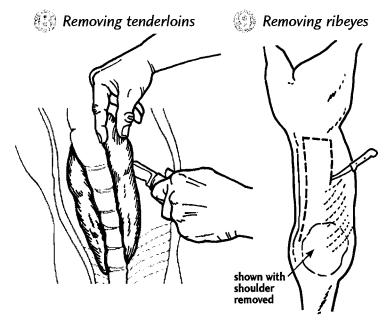


from the carcass. Finish the skinning job by removing the head and lower front legs using a knife at joints or with a saw. Wipe the carcass with a damp cloth and you are ready to start butchering your deer for the table.



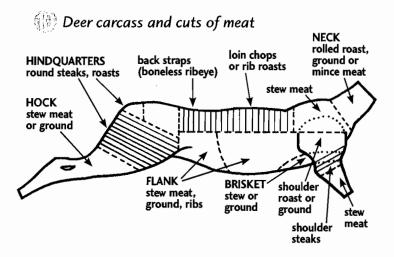
Gettin' it Ready for the Freezer

Your deer's age is going to have a big impact on tenderness, so take that into consideration when deciding upon how it will be processed and cooked. Yearlings make excellent steaks and roasts without further efforts to tenderize the meat. The palatability of older animals can be improved either mechanically by cubing or chemically with tenderizers, but are often better suited for canning, stews, grinding, and jerky. The best steaks and roasts will be obtained from the tenderloin 3 (located inside the body cavity along the back, forward of the pelvis), ribeye (on either side of the backbone on the outside of the carcass — often times called "back straps" or "outside tenderloins"), and the rounds or upper back legs. Steaks from these cuts are delicious when grilled or fried. The secret to their preparation is to avoid overcooking them. They should be served while still pink on the inside.



The shoulders and neck can also be converted to steaks and roasts, but should be prepared using a moist, slow cooking method until tender. However, because these are lower quality cuts, they are best suited for cutting into chunks for stew or ground for burger. The lower legs should be reserved for grinding into burger.

When cutting steaks and roasts, separate the muscle bundles so that you can remove as much of the tough, fibrous sheathing as possible. It takes a few minutes, but is well worth the time. Excess fat should also be trimmed off. Cut steaks one half to three-quarters-inch thick. Roasts should be at least two inches thick. Meat for stew should be chunked into one inch size pieces while meat destined for the grinder should be double ground to improve tenderness. Wrap the meat in clear plastic wrap to exclude air, then in a good quality, waxed freezer paper. Individual packages should be sized according to your anticipated needs. Label packages and freeze. Whole meat can be frozen for about a year while ground meat is best if used within six months.



Above all, don't be intimidated by the thought of processing your own venison. As long as you are cutting the meat the way you want to use it, you can't cut it wrong. About all it takes is a couple of sharp knives, a sharpening stone, a knife sharpener or a butcher steel to hone your knives, freezer wrap and tape, a small manual meat grinder, and some time and patience. In return for your small investment, you receive a tremendous feeling of satisfaction in knowing that you did the entire job yourself. It will make the delicious venison that you will enjoy during the next year taste that much better.

♦ Fixin' Vitties

With just a few cooking modifications, venison can be prepared the same as any similar cut of pork or beef. Remember that venison is a lean meat that can become dry and tough when using dry cooking methods. Serve grilled steaks and open-roasted roasts while the meat is still juicy and pink on the inside and your dinner guests and family will rave about dinner. A pinch of salt after cooking (salt before cooking causes toughness) is all one needs to highlight venison's delicate flavor. Serve with baked potatoes, your favorite vegetable, and hot rolls for a sure-fire hit.

Add a slightly thinned can of cream of mushroom soup to steaks and roasts wrapped in foil, bake until the meat falls apart, and you have an epicurean's delight. Not only will the meat be delicious, you will have a gravy for mashed or fried potatoes that will make your mouth water.

Substitute ground venison for hamburger in your favorite chili or beef vegetable soup recipe. When using ground venison in meat loaf, replace one third of the venison with plain pork sausage for added juiciness.

Ground venison is extremely versatile. The list of possibilities is endless and includes spaghetti, lasagna, tacos, and burgers. Let your imagination run wild as it's hard to go wrong with ground venison.

Cook a neck roast or stew meat in a pot of water with a bay leaf and clove of garlic until the meat is tender and falling off the bone. Remove the bay leaf, garlic clove, and bones. Add three carrots sliced into one-inch pieces, six medium to large potatoes cut into one and a half inch pieces, and half an onion which has been diced into quarter inch pieces. Cook until nearly done. Add one can corn and one of green beans. Cook until the potatoes and carrots are tender. Thicken as desired with flour or cornstarch, and season with salt and black pepper. This makes a meal by itself.

Try this ground venison recipe:

Blue Cheese Venison Bake

- 1 pound ground venison
- 2 tablespoons olive oil for browning
- 1/2 tablespoon minced garlic
- 2 tablespoons Worcestershire sauce
- 1 package dry French onion soup mix
- 1 cup sliced mushrooms
- 1 cup blue cheese (crumbled)
- blue cheese salad dressing

Dough for crust:

2 cups baking mix water as indicated on baking box



Brown ground venison in olive oil. Add garlic, Worcestershire sauce, dry soup mix, and mushrooms, simmer for a few minutes. In a separate bowl, mix baking mix with water to form dough. Spread dough over bottom of a pie pan. Pour venison mixture over dough and sprinkle on crumbled blue cheese. Bake 30 minutes in 350 degree oven. Serve with blue cheese salad dressing on top of pie as desired. Serves 4-6.

Venison is a delicious and nutritious meat, low in fat and cholesterol. It is rich in riboflavin, B6, and thiamin. It is the number one wild game served by hunters in Ohio.

For more great wild game recipes, go to www.wildohiocookbook.com

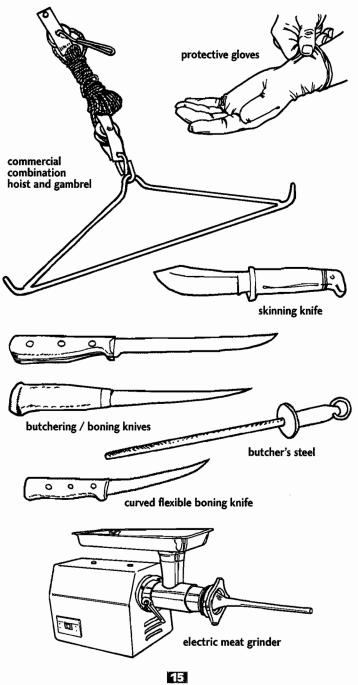
Suggested Tools for Field Dressing and Butchering Your Deer

- String for attaching temporary tag and tying intestines
- Rubber gloves or disposable gloves
- Plastic bag for heart and liver
- Sharp knife, either a pocket or sheath-knife will work fine
- Hoist system for raising deer off the ground
- Boning knives
- Sharpening stones
- Butcher's steel
- Meat saw (optional, as bones can be easily separated at joints)
- Meat grinder
- Clear plastic wrap
- Freezer paper, high-quality waxed
- Freezer or masking tape for sealing packages
- Marker for labeling packages
- Bleach solution for cleaning equipment afterwards

Properly cared for and prepared venison makes for delicious eating which you can share with family and friends. Additionally, each time you enjoy one of those fine meals, you are reminded of exciting days afield with your hunting companions.

Field dressing and butchering tools and materials





Field Dressing Your Deer







Division of Wildlife • Ohio Department of Natural Resources Publication 111 (Sep06)

WILDLIFE Reflections

What Only the Hunter Knows...

by W. H. (Chip) Gross

esterday morning, I sat in a large auditorium along with several hundred other people and listened to various speakers talk about bird watching—how to identify birds both by their markings and sounds, what foods to place at feeders to attract birds, what optics to buy, and a myriad of other tips and tidbits to enhance birding. I enjoyed it. I learned things about birds that I did not know. And like those other people, I consider myself a serious birder. But somehow, secretly, I felt out of place.

This morning, as the sun was coming up, I sat on the edge of a picked cornfield dressed in camouflage with a shotgun in my hands, waiting for mourning doves to arrive. And before the first birds began to fly I had to ask myself, "Is my life a contradiction? Am I living a lie? How can I study birds one day and hunt them the next?" I felt that if most of those people in that auditorium yesterday knew what I was up to today they would not approve.

But I had answered—no, settled—those questions in my mind many years ago. And if you care to listen, here is why I choose to hunt.

I hunt because I enjoy hunting. If that sounds simplistic, so be it. But I do not hunt out of some altruistic motivation

such as "harvesting the surplus of game" or "balancing nature." I believe in those basic biological principles, but nature seems to have done just fine without me for thousands of years before I arrived, thank you, and no doubt will continue without my help long after I'm gone. No, I hunt because I enjoy hunting. And please note that I said hunting, not killing. There is a difference. Ortega v Gasset, the Spanish philosopher, wrote in his Meditations On Hunting, "...one kills in order to have hunted...," not vice versa.

So if I enjoy hunting, that begs the question: Why? Frankly, I don't know. I simply know that I have been inexplicably drawn to the out-of-doors ever since I was a boy. There is magic in the woods, fields, rivers, and lakes, a certain deep satisfaction that I find nowhere else in life. That magic can certainly be experienced outdoors without hunting, but I seldom feel it quite so intensely as when I become the hunter.

Maybe that's the difference between "wildlife watchers" and hunters—participation. Hunter's participate in the endless cycle of life and death, predator and prey, while watchers simply observe. And I am not saying that mere observation of the natural world is somehow wrong or incomplete. If a person decides just to watch, that's fine. But if ever a person chooses to walk down out of the stands and onto the playing field, he or she will come to know what only the hunter knows.

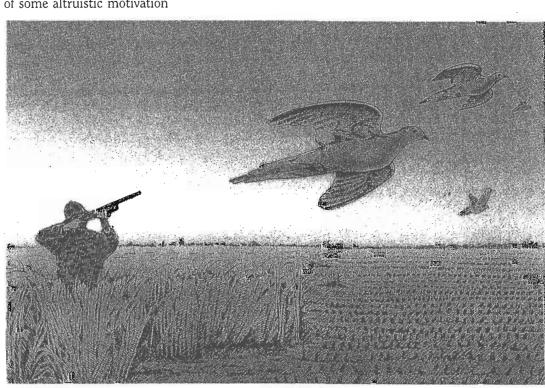
The first doves of the morning arrive in a small flock from the north, flying hard, crossing from my right to left. When they reach 30 yards I stand, pick out the lead bird, and down it with a single, quick shot. The dove tumbles to the ground in a spray of feathers. Its companions hurry on.

And once again, I feel both the exhilaration and touch of sadness of the hunter—the thrill and sense of accomplishment of game well taken, yet all the while knowing that I have killed a living thing. And, somehow, at least in a small way, the world will never again be quite the same because of it...

Contradiction?



W. H. "Chip" Gross is the editor of Wild Ohio magazine.



Why do Hunters Kill?

It is my feeling that hunting is not a sport, inasmuch as a sport is most often perceived as an organized activity performed for the entertainment of the participants and/or onlookers. Hunting is something that goes much deeper than that.

I've been asked several times why hunters kill, when we could just as easily stalk our prey with a camera or binoculars, just for the thrill of being up close with a deer, turkey, or other game animal. The answer is simple: without the kill, we're not hunting.

The kill is the culmination of the hunt. We're not fishing here; there's no catch-and-release option, it's all or nothing. Yes, it's fulfilling just to be in the woods with the animals, and to get up-close-and-personal with them. Yes, it's a thrill to have a deer walk by at 25 yards, totally unaware of my presence. But the kill is what makes it hunting.

I've got to quote a favorite statement here: We don't hunt to kill, we kill in order to have hunted. I'm not sure of the source of this quote, but it's right on. We hunt for the thrill of the chase, and the ecstatic peace that comes with being out there trying to beat a wild animal at his own game. When the chance finally comes, there is no doubt; we will kill.

But, can't we just stroll down to the grocery store and pick out a nice roast, instead of killing the poor forest creatures? Yep. But why should we? When I kill a deer, I know that deer had a chance, and that up until the time I took him, he lived a wild, free life. That erstwhile cow that's sitting in the foam trays in the butcher's case was born to die... it never had a chance. Add to that the various steroid injections, etc, and I know I'd rather be eating the deer. I also know the conditions in which the deer was butchered, since I've always done that myself. I also have the pride in furnishing it, rather than paying someone else to do my killing for me.

To those who don't kill and don't understand why we do, I'll borrow from an acquaintance. Why do we kill rather than buy meat? For the same reason many folks grow vegetables in their back yards... for the same reason amateur musicians play music rather than buying it... for the same reason folks paint or draw pictures, rather than buying someone else's art... for the same reason many enjoy photography rather than just buying a picture book of photos... because of the pride that lies in doing it ourselves. Also, venison (deer meat) is healthier than beef or pork, as it is much leaner.

I have to include another quote as well, from <u>The Old Man and the Boy</u>: "...if there's one thing I despise it's a killer, some blood-crazy idiot that just goes around bambamming at everything he sees. A man who takes pleasure in death just for death's sake is rotten somewhere inside, and you'll find him doing things later in life that'll prove it." All true hunters agree with this, and we don't kill out of bloodlust, and we don't kill everything we see.

The kill is not the bottom line reason for the hunt, but it cannot be removed from the equation.

-Russ Chastain



FACTS

Hunting and Fishing in Wilderness

"I have congenital hunting fever and three sons. As little tots, they spent their time playing with my decoys and scouring vacant lots with wooden guns... But what are they going to do... if there be no more deer in the hills, and no more quail in the coverts?"

- Aldo Leopold, Founder, the Wilderness Society

"Hunters were the first conservationists in America."

-Theodore Roosevelt, U.S. President.

Hunters and anglers share a deep and abiding connection to the land. For more than 100 years they have been a leading part of the movement to conserve wildlife and wildlands. Aldo Leopold, the author of *A Sand County Almanac*, America's first full-time professor of wildlife management, and a founder of The Wilderness Society, came to see the value of protecting wilderness through his experiences as a hunter. Leopold recognized that good hunting depended on preserving large tracts of wilderness. Today we use the Wilderness Act of 1964 to protect some of America's best remaining wildlife habitat and fishing streams. If they were alive today, Aldo Leopold and Teddy Roosevelt would wholeheartedly argue that hunters, anglers, and conservation groups must work together to preserve America's natural heritage.

Wilderness in America

The Wilderness Society, in the tradition of the early hunter-conservationists, helped lead the effort to win passage of the Wilderness Act in Congress in 1964. The National Wilderness Preservation System adds a layer of protection to parts of national forests, national parks, national wildlife refuges, and other public lands that remain untrammeled and unspoiled, in the Boundary Waters, the Appalachians, the Northern Rockies, Alaska, and elsewhere. Today, more than 105 million acres of our public lands are part of the Wilderness System, including 58 million acres in Alaska. Wilderness designation for an area prevents development, road-building, and motorized vehicles, but maintains access for recreation.

Hunting and Fishing: At Home in Wilderness

Hunting and fishing have always been among the most popular forms of recreation in wilderness. Except for wilderness areas inside national parks, which generally prohibit hunting already, wilderness designation itself places no new restrictions or quotas on hunting or fishing, and these activities remain under the oversight of state fish and wildlife agencies.

Wilderness: Prime Habitat for Fish and Wildlife

Wilderness areas provide some of the best habitat in America for fish and game, safeguarding coldwater fisheries and intact ecosystems, including important seasonal habitat for wildlife and migratory birds. Intact habitat in wilderness areas means healthy populations of fish and wildlife for hunters and anglers, both in wilderness areas and in nearby and downstream non-wilderness areas. For example:

- Across the country, road building in remote areas and the activities it facilitates decrease big game habitat. Wilderness areas, in contrast, preserve large, contiguous land areas that support healthy numbers of big game, including elk, deer, and antelope. This maintains healthy wildlife populations that inhabit wilderness areas and also migrate seasonally to other areas.
- Roadless areas, including wilderness areas, are home to many blue-ribbon trout streams that
 provide critical habitat for species such as westslope, greenback, and Colorado River
 cutthroat. Wilderness designation prevents logging and road building that fill streams with
 silt and destroy fish habitat.
- Wilderness also can help maintain the health of a species. In the Rocky Mountains, for example, the Tubifex tubifex worm that hosts the trout-killing whirling disease parasite is often found in degraded waters—but is almost never found in wilderness streams.
- Though most of our wilderness is in the West, popular eastern game species also benefit from wilderness. For instance, the ruffed grouse thrives in the wilderness areas of the national forests in North Carolina, Tennessee, and elsewhere in the Southern Appalachians.

Wilderness provides benefits for all Americans, whether they hunt, fish, camp, study birds, hike, boat, take photographs—or simply benefit from the clean air and water produced wilderness areas. Hunters, anglers, and other conservationists should work together to protect our wildlife, wildlands, and common heritage.

For more information, contact Pete Rafle, The Wilderness Society, at (202) 429-2642 or pete rafle@tws.org

January 2005

WILDLIFE Reflections



Should Kids Learn to Hunt?

By W. H. (Chip) Gross

hould kids learn to hunt?
In my opinion, the answer to that question is yes—if they want to.
The reason I add the caveat "if they want to" is that I believe hunting to be a very personal choice—a serious personal decision—and that no one should be forced into the hunting field against his or her will, especially a child. But if a young person does show an interest, by all means, teach them to hunt.

In years past, hunters were held in high regard. People who once walked the Ohio country such as Simon Kenton, Daniel Boone, and the Shawnee Tecumseh were not only revered for their adership abilities, but also for their anting skills. These hunters, and many others like them, were often the only difference between frontier families prospering during an Ohio winter or starving. These hunters' knowledge of the natural world was vast and their skill with gun or bow legendary.

Compare that with society's image of hunters today. In movies, hunters are portrayed mostly as bloodthirsty killers, and in cartoons hunters are made to look like buffoons. But though our societal impressions of hunters have changed, the knowledge and skills required to become a proficient hunter have not. Whether society as a whole cheers or jeers, the allure of hunting remains, and achieving the rank of a competent hunter is a worthwhile goal that takes years to accomplish.

I have heard the argument suggested recently that teaching kids to hunt also teaches them violence. In my opinion, the answer to that is simply, respectfully: hogwash. Does teaching teenagers to drive also teach them road-rage?

Quite to the contrary, the November 3, 1998 issue of *Time* magazine (page 106) states that, "Teachers and counselors report that kids who are taught to hunt responsibly are generally among the more mature and better-

mannered—and saner—adolescents in the wilds of modern American culture." And in the same article, Ronald Stephens, director of the National School Safety Center, created in 1984 to study violence in schools states, "the notion that anyone who hunts is violent is nonsense...There is no reason in my view to condemn hunting." Similarly, Terri Royster, who teaches a class in juvenile

"...the allure of hunting remains, and achieving the rank of a competent hunter is a worthwhile goal that takes years to accomplish."

crime and behavior at the FBI Academy in Virginia says she knows of no research that links hunting and violence against humans. "I can't think of any cases where hunting has been a factor," Royster says.

Possibly a personal example might help. When my two sons were young. they saw me going on hunting trips. This naturally made them curious as to what dad was up to when he left the house with his gun, so they eventually asked to go along. When they were old enough I took them, but did not at first allow them to carry a firearm, just observe. At about age 12 or so they both completed the Ohio Hunter Education Course and only then did I allow them to carry a gun. And when they did, I left my gun at home. My job, for many years thereafter, was simply to walk behind them as coach, telling them when it was safe to load their firearm, what directions afforded a safe shot, when the game was in range, and when to shoot.

Today, these two well-adjusted young men are both attending Christian colleges, one studying accounting while the other majors in philosophy. Hardly sounds like

two wildeyed, violent gun nuts now does it? And when they come home from school on holiday breaks such as at Thanksgiving or Christmas, what do they want to do? Go hunting with Dad. Why? Because hunting has given them enjoyment, pleasures, and memories that they have found nowhere else in life.

Hunting is not for everyone. Whether to hunt or not is a personal choice that a

person must make for him or herself. But if you are a hunter and you have sons or daughters that want to learn to hunt, teach them. And if not, take that young relative or neighborhood kid under your wing that shows an interest in the outdoors.

You'll be the richer for it—and so will they



W. H. (Chip) Gross is the editor of *Wild Ohio*. If you would like to comment on this editorial, either positively or negatively, he may be reached at Ohio Division of Wildlife, attention: Chip Gross, 1840 Belcher Drive, Columbus, OH 43224-1329; or fax to 614-262-1171; or email to: chip.gross@dnr.state.oh.us.



A NATIONAL ORGANIZATION WORKING FOR AN AMERICAN TRADITION

The Member's Forum

Letters to WTU . Photo Gallery . Hunting Tips

Letters to Whitetails Unlimited

This is a very well written short essay sent in by Macushla Mulroy of New London, Wisconsin. Well said Macushla!

Dear WTU:

My heart raced, my body tensed, and my anticipation grew unbearable as I listened keenly to the footsteps creeping up behind me. I am eighteen years old, and have been hunting since age twelve. I am also a girl. Why would a girl be doing this, you wonder? Because the love of nature is not separated by gender. I should be able to participate in this activity just as freely as men, but society's close-mindedness makes me feel out of place. I believe bullets shot from a woman's gun can be just as effective as those shot from a man's.

It seems that most teenagers today are more interested in playing video games than in getting out of bed before the sunrises, shivering in the quiet wilderness, and waiting to see the buck of their dreams. However, reports by teachers and counselors say that children who learn to hunt responsibly are typically better mannered and more mature adolescents. Therefore, I believe that hunting is a wholesome, well-rounded activity that should be free from sexual discrimination.

"Women's hunting is part of a much broader cultural picture. We've gotten to a point socially and culturally where a lot of these gender barriers have come down. Once these walls come down, people realize it's much more satisfying to engage in activities together instead of having activities segregated by gender," said Mary Stange, a women's studies professor at Skidmore College in Saratoga Springs, New York.

"It's been my experience that females are very well equipped both mentally and physically for hunting. And generally, women have more patience than men," commented Gloria Nelson, the owner of Homestead Lodge & Buffalo Farm in Oxbow, Maine.

Becoming an Outdoors Woman is an association started specifically for women to help them learn the ropes of hunting and making it on their own in the outdoors. This program allows women to ask questions that they might otherwise feel inadequate asking a man. Founded in 1991,by Christine Thomas, this Wisconsin based program is largely funded by state wildlife agencies and has some 15,000 female members.

It is a fact that hunters kill approximately four million deer each year and thousands more are killed on the road. Still hundreds of thousands die of starvation every year. Doesn't it seem better to harvest them and actually use the meat, than to let them die of starvation? Left unchecked, the deer heard would overpopulate, causing extensive crop damage, mass starvation, and an increase in car-deer accidents.

Some men argue that women hunters are destroying their male bonding time. They feel that since traditionally men were the hunters and gatherers and women stayed in the home, that things should not change. However some men, like my dad, feel that women should be welcomed into the sport. "If women experience what it is that makes our time in the woods so precious, maybe then they will understand why hunting is so important to us," replied my father, Dave Mulroy.

Sincerely, Macushla Mulroy

What Makes the Animal Rights Movement Tick?

− An Interview with Marsha Kell{

arsha Kelly is a founding partner of Sterling Executive Counselors, Inc., a Minnesota-based firm specializing in the

management of high-profile, controversial issues, including animal rights. A nationally recognized expert on animal rights issues, Ms. Kelly has more than 25 years experience in providing media relations and issuemanagement counsel to regional and national

Marsha Kelly is a nationally

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rights issues and a founding

partner of Sterling Executive

corporations challenged by

the animal rights movement.

Counselors, Inc., a

frequently hired by

Minnesota-based firm

businesses and organizations in agriculture, wildlife management, biomedical research, and other fields. I spoke with her last fall during a workshop she conducted for the Ohio Chapter of The Wildlife Society. – Chip Gross, Editor.

Wild Ohio: To begin with, Marsha, what is the definition of animal rights?

"By their own admission, the more than 400 animal rights groups in America today believe that 'animals are not ours to eat, wear, or experiment on.' They oppose all animal use, based on the philosophy that 'a rat is a pig is a dog is a boy.' They actively campaign

against all animal use—not only hunting and fishing, but the use of animals in agriculture, biomedical research, education, recreation—even the ownership of pets. In the animal rights view, all animal use—no matter how

responsible or humane—is exploitation, and therefore unacceptable.

"In contrast, the animal welfare view supports the responsible use of animals. Most of us believe it's entirely natural and appropriate to use animals, as long as we do so responsibly and humanely."

<u>Wild Ohio</u>: If most people in this country believe in the responsible use of animals, how has the animal rights movement been able to gain a foothold?

"The answer to that question is complex, but let me just name some factors that the experts tell us have been

major philosophical influences in recent years: anthropomorphism, erosion of the line between humans and animals, and the expanded concept of rights in general.

"In addition, animal rights groups are well funded, raising some \$500 million annually through a 501C3, tax-exempt status. They also have media access because of celebrity involvement. And they are constantly attacking the status quo, which is considered news. That is why these groups get so much media coverage in America.

"Another factor is the growing acceptance in this country of civil disobedience, boycotts, and protests as an outgrowth of the Civil Rights movement of the 1960s, the anti-war movement of the 70s, and the women's liberation movement of the 80s."

<u>Wild Ohio</u>: What are some of the general characteristics of animal rights group members?

"According to a 1992 study done by Dr. Wes Jamison, animal rights activist groups are: 80 percent women; 90 percent white; 70 percent college graduates, with 20 percent holding graduate degrees; average age is 26, and getting younger; average income is \$35,000; and members are overwhelmingly urban."

<u>Wild Ohio</u>: What do you see in the future concerning the animal rights movement in America?

"One of the emerging trends is the growing schism between animal rights hard-liners—those who endorse violence—and the more moderate animal rights supporters, those who champion the animal rights cause but oppose violent tactics. But I also see an increasing awareness of these crimes by law enforcement agencies and a strong desire to solve these types of cases. Another trend to look for in the future is increased activism by animal rights groups at the state legislative levels, such as Ohio experienced last year in the State Issue One mourning dove hunting ballot initiative."

<u>Wild Ohio</u>: So what is your final message in all of this to *Wild Ohio* readers?

Sportsmen and women should keep in mind that of the long list of items on the animal rights agenda, shutting down the fur industry is number one and ending hunting, fishing, and trapping as we know it today is number two. We need only look to Europe to see what the animal rights movement has accomplished. Hunting, fishing, and trapping have been seriously curtailed in some European countries, and are virtually nonexistent in others. People in this country need to stop and think—is that what we want for America in the next millennium?"



Animal rights activists picket outside a fishing sports show in Columbus, Ohio, January 1999.

WILDLIFE Reflections 35 Clicket

Us and Them...Mending Fences

By W.H. (Chip) Gross

like to hunt, fish, and trap. I also like to bird watch, feed wildlife at my home year-round, take pictures of wild animals, and write about the out-of-doors and nature. Some people see the first three out-door activities mentioned as incompatible with the last four and vice versa. They would term the first three as "consumptive" uses of wildlife, because an animal is killed, and the last four as "nonconsumptive" uses, because no death occurs.

But regardless of whether you choose to hunt, fish, and trap your own meat or pay someone to do your killing for you by buying your meat at the grocery store, everyone "consumes" to live. Like it or not, the death of some living thing (plant or animal) is what allows us to survive; it's simply the way the natural world works.

My point is this: I'm seeing a disturbing trend in our country today among the people who love wildlife and the outdoors, the gradual polarization into two camps—those who choose to hunt, fish, and trap, and those who choose not to. Both choices are valid. But both sides seem inherently suspicious of the other and both are quick to point the finger of blame when a wildlife-associated problem comes to the forefront. Yet both groups have the same ultimate goal, the conservation and/or preservation

of wildlife. Aren't we more alike than we are different? Shouldn't we be working together instead of wasting time, energy, and resources labeling each other as either "consumptive" or "nonconsumptive" and trying to figure out who fits where?

And then there are the people who attempt to ride the fence. In their minds, for example, it is acceptable to catch and eat a perch, which may weigh only a few ounces, but not acceptable to shoot and eat a dove

"Some things must die for others to live."

which will weigh those same few ounces. Is it because the fish is cold and slimy and the bird is warm and feathery that they draw the line? Is it because the bird is warm-blooded, more like us, that makes it different from the fish? I don't know.

In America, there will always be differences of opinions, and that is healthy. I simply ask you to evaluate your opinions on wildlife issues in light of the immutable laws of the natural world. The only "us" and "them" that need exist is the "us" who love wildlife and wild places, and the "them" of the wild animals themselves.

Some things must die for others to live. Whether you choose to actively participate in hunting, fishing, or trapping is a very personal choice, and I would not, could not, make that decision for you. But please, don't think less of me if I choose to participate, and I won't think less of you if you choose not.

(Note: *Wild Ohio* would like to hear your opinion on this commentary. If you would care to comment, either positively or negatively, address your comments to: Ohio Division of Wildlife, *Wild Ohio* magazine, Attention: Chip Gross, Editor, 1840 Belcher Drive, Columbus, OH 43224-1329; or fax us at 614-262-1171; or e-mail to: Chip.Gross@dnr.state.oh.us)

Why Sport Hunting is Cruel and Unnecessary PETA Position Statement

Although it was a crucial part of humans' survival 100,000 years ago, hunting is now nothing more than a violent form of recreation that the vast majority of hunters does not need for subsistence.(1) Hunting has contributed to the extinction of animal species all over the world, including the Tasmanian tiger and the great auk. (2,3)

Less than 5 percent of the U.S. population hunts, yet hunting is permitted in many wildlife refuges, national forests, state parks, and on other public lands.(4) Forty percent of hunters slaughter and maim millions of animals on public land every year, and by some estimates, poachers kill just as many animals illegally. (5,6)

Pain and Suffering

Many animals suffer prolonged, painful deaths when they are injured but not killed by hunters. A member of the Maine Bowhunters Alliance estimates that 50 percent of animals who are shot with crossbows are wounded but not killed.(7) A study of 80 radio-collared white-tailed deer found that of the 22 deer who had been shot with "traditional archery equipment," 11 were wounded but not recovered by hunters.(8) Twenty percent of foxes who have been wounded by hunters are shot again; 10 percent manage to escape, but "starvation is a likely fate" for them, according to one veterinarian.(9) A South Dakota Department of Game, Fish, and Parks biologist estimates that more than 3 million wounded ducks go "unretrieved" every year.(10) A British study of deer hunting found that 11 percent of deer who'd been killed by hunters died only after being shot two or more times and that some wounded deer suffered for more than 15 minutes before dying.(11)

Hunting disrupts migration and hibernation patterns and destroys families. For animals like wolves, who mate for life and live in close-knit family units, hunting can devastate entire communities. The stress that hunted animals suffer—caused by fear and the inescapable loud noises and other commotion that hunters create—also severely compromises their normal eating habits, making it hard for them to store the fat and energy that they need in order to survive the winter.

Blood-Thirsty and Profit-Driven

To attract more hunters (and their money), federal and state agencies implement programs-often called "wildlife management" or "conservation" programs—that are designed to boost the number of "game" species. These programs help to ensure that there are plenty of animals for hunters to kill and, consequently, plenty of revenue from the sale of hunting licenses.

Duck hunters in Louisiana persuaded the state wildlife agency to direct \$100,000 a year toward "reduced predator impact," which involved trapping foxes and raccoons so that more duck eggs would hatch, giving hunters more birds to kill.(12) The Ohio Division of Wildlife teamed up with a hunter-organized society to push for clear-cutting (i.e., decimating large tracts of trees) in Wayne National Forest in order to "produce habitat needed by ruffed grouse."(13)

In Alaska, the Department of Fish and Game is trying to increase the number of moose for hunters by "controlling" the wolf and bear populations. Grizzlies and black bears have been moved hundreds of miles away from their homes; two were shot by hunters within two weeks of their relocation, and others have simply returned to their homes.(14) Wolves have been slaughtered in order to "let the moose population rebound and provide a higher harvest for local hunters." (15) In the early 1990s, a program designed to reduce the wolf population backfired when snares failed to kill victims quickly and photos of suffering wolves were seen by an outraged public.(16)

Nature Takes Care of Its Own

The delicate balance of ecosystems ensures their own survival—if they are left unaltered. Natural predators help maintain this balance by killing only the sickest and weakest individuals. Hunters, however, kill any animal whom they would like to hang over the fireplace—including large, healthy animals who are needed to keep the population strong. Elephant poaching is believed to have increased the number of tuskless animals in Africa, and in Canada, hunting has caused bighorn sheep's horn size to fall by 25 percent in the last 40 years; Nature magazine reports that "the effect on the populations' genetics is probably deeper."(17)

Even when unusual natural occurrences cause overpopulation, natural processes work to stabilize the group. Starvation and disease can be tragic, but they are nature's ways of ensuring that healthy, strong animals survive and maintain the strength level of the rest of their herd or group. Shooting an animal because he or she might starve or become sick is arbitrary and destructive.

"Sport" hunting not only jeopardizes nature's balance, it also exacerbates other problems. For example, the transfer of captive-bred deer and elk between states for the purpose of hunting is believed to have contributed to the epidemic spread of chronic wasting disease (CWD). As a result, the U.S. Department of Agriculture (USDA) has given state wildlife agencies millions of dollars to "manage" deer and elk populations. (18) The fatal neurological illness that affects these animals has been likened to mad cow disease, and while the USDA and the Centers for Disease Control and Prevention

claim that CWD has no relationship to any similar diseases that affect humans or farmed animals, the slaughter of deer and elk continues.(19,20)

Another problem with hunting involves the introduction of exotic "game" animals who, if they're able to escape and thrive, pose a threat to native wildlife and established ecosystems. After a group of nonnative wild boars escaped from a private ranch and moved into the forests of Cambria County, Pa., the state of Pennsylvania drafted a bill prohibiting the importation of all exotic species of animals.(21)

Canned Crueity

Most hunting occurs on private land, where laws that protect wildlife are often inapplicable or difficult to enforce. On private lands that are set up as for-profit hunting reserves or game ranches, hunters can pay to kill native and exotic species in "canned hunts." These animals may be native to the area, raised elsewhere and brought in, or purchased from individuals who are trafficking in unwanted or surplus animals from zoos and circuses. They are hunted and killed for the sole purpose of providing hunters with a "trophy."

Canned hunts are becoming big business—there are an estimated 1,000 game preserves in the U.S.(22) Ted Turner, who owns more land than any other landowner in the country, operates 20 ranches, where hunters pay thousands of dollars to kill bison, deer, African antelopes, and turkeys.(23)

Animals on canned-hunting ranches are often accustomed to humans and are usually unable to escape from the enclosures that they are confined to, which range in size from just a few yards to thousands of acres. Most of these ranches operate on a "no kill, no pay" policy, so it is in owners' best interests to ensure that clients get what they came for. Owners do this by offering guides who are familiar with animals' locations and habits, permitting the use of dogs, and supplying "feeding stations" that lure unsuspecting animals to food while hunters lie in wait.

Only a handful of states prohibit canned hunting, and there are no federal laws regulating the practice at this time.(24) Congress is considering an amendment to the Captive Exotic Animal Protection Act that would prohibit the transfer, transportation, or possession of exotic animals "for entertainment or the collection of a trophy."(25)

'Accidental' Victims

Hunting "accidents" destroy property and injure or kill horses, cows, dogs, cats, hikers, and other hunters. In 2006, Vice President Dick Cheney famously shot a friend while hunting quail on a canned-hunting preserve. (26) According to the International Hunter Education Association, there are dozens of deaths and hundreds of injuries attributed to hunting in the United States every year—and that number only includes incidents involving humans. (27) It is an ongoing problem, and one warden explained that "hunters seem unfamiliar with their firearms and do not have enough respect for the damage they can do."(28)

A Humane Alternative

There are 30 million deer in the U.S., and because hunting has been an ineffective method to "control" populations (one Pennsylvania hunter "manages" the population and attracts deer by clearing his 600-acre plot of wooded land and planting corn), some wildlife agencies are considering other management techniques.(29,30) Several recent studies suggest that sterilization is an effective, long-term solution to overpopulation. A method called TNR (trap, neuter, and return) has been tried on deer in Ithaca, N.Y., and an experimental birth-control vaccine is being used on female deer in Princeton, N.J.(31,32) One Georgia study of 1,500 white-tailed deer on Cumberland Island concluded that "if females are captured, marked, and counted, sterilization reduces herd size, even at relatively low annual sterilization rates."(33)

What You Can Do

Before you support a "wildlife" or "conservation" group, ask about its position on hunting. Groups such as the National Wildlife Federation, the National Audubon Society, the Sierra Club, the Izaak Walton League, the Wilderness Society, and the World Wildlife Fund are pro-sport-hunting or, at the very least, they do not oppose it.

To combat hunting in your area, post "no hunting" signs on your land, join or form an anti-hunting organization, protest organized hunts, and spread deer repellent or human hair (from barber shops) near hunting areas. Call 1-800-448-NPCA to report poachers in national parks to the National Parks and Conservation Association. Educate others about hunting. Encourage your legislators to enact or enforce wildlife-protection laws, and insist that nonhunters be equally represented on the staffs of wildlife agencies.

References

- 1) National Research Council, "Science and the Endangered Species Act" (Washington, D.C.: National Academy Press, 1995) 21.
- 2) Grant Holloway, "Cloning to Revive Extinct Species," CNN.com, 28 May 2002.
- 3) Canadian Museum of Nature, "Great Auk," 2003.
- 4) U.S. Fish and Wildlife Service, "National Survey of Fishing, Hunting, and Wildlife—Associated Recreation" (Washington,

- D.C.: GPO, 2001) 5.
- 5) U.S. Fish and Wildlife Service 80.
- 6) Illinois Department of Natural Resources, "Poaching Is a Serious Crime," May 2003.
- 7) Stephen S. Ditchkoff et al., "Wounding Rates of White-Tailed Deer With Traditional Archery Equipment," *Proceedings of the Annual Conference of the Southeastern Association of Fish and Wildlife Agencies* (1998).
- 8) D.J. Renny, "Merits and Demerits of Different Methods of Culling British Wild Mammals: A Veterinary Surgeon's Perspective," Proceedings of a Symposium on the Welfare of British Wild Mammals (London: 2002).
- 9) Spencer Vaa, "Reducing Wounding Losses," South Dakota Department of Game, Fish, and Parks, 2004.
- 10) E.L. Bradshaw and P. Bateson, "Welfare Implications of Culling Red Deer (Cervus Elaphus)," *Animal Welfare* 9 (2000): 3-24
- 11) John Swinconeck, "Controlled Hunt May Be Solution to the Excess of 'Deer at Our Doorstep," York County Coast Star 27 Jun. 2002.
- 12) Bob Marshall, "Is Predator Program Enough?" Times-Picayune 2 Mar. 2003.
- 13) Dave Golowenski, "Grouse Numbers Go Up if Trees Come Down," The Columbus Dispatch 20 Feb. 2003.
- 14) "Hunters Shoot Two Relocated Bears," Associated Press, 9 Jun. 2003.
- 15) Joel Gay, "McGrath Wolf Kills Fall Short," Anchorage Daily News 25 Apr. 2003.
- 16) Joel Gay, "Governor Takes Heat From Hunters Expecting Aerial Wolf Control," Anchorage Daily News 8 Apr. 2003.
- 17) John Whitfield, "Sheep Horns Downsized by Hunters' Taste for Trophies," Nature 426 (2003): 595.
- 18) U.S. Department of Agriculture, "USDA Makes \$4 Million Available to State Wildlife Agencies for Strengthening Chronic Wasting Disease Management," news release, 15 Apr. 2003.
- 19) U.S. Department of Agriculture, Animal and Plant Health Inspection Services, "Chronic Wasting Disease," Nov. 2002.
- 20) Centers for Disease Control and Prevention, Division of Media Relations, "Fatal Degenerative Neurologic Illnesses in Men Who Participated in Wild Game Feasts—Wisconsin, 2002," news release, Feb. 2003.
- 21) Judy Lin, "Pennsylvania Worried About Wild Boar Escape," Associated Press, 17 Mar. 2002.
- 22) "Reps. Farr, Shays Introduce Bill to Can Canned Hunts," U.S. Fed News 7 Oct. 2004.
- 23) Audrey Hudson, "Greens Cut Turner a Break; Critics Question His Stewardship of Western Land," The Washington Times 20 Jan. 2002.
- 24) National Conference of State Legislatures, "Environment, Energy, and Transportation Program: Fishing, Hunting, and Wildlife," Apr. 2003.
- 25) U.S. House of Representatives, H.R. 5242, Session 108, introduced 7 Oct. 2004.
- 26) Dana Bash, "Cheney Accidentally Shoots Fellow Hunter," CNN.com, 12 Feb. 2006.
- 27) International Hunter Education Association, "Hunter Incident Clearinghouse," 2006.
- 28) Tom Harelson, "1998 Deer Gun Season Report," Wisconsin Department of Natural Resources, 8 Dec. 1998.
- 29) "Deer Eating Away at Forests, Nationwide," Associated Press, 18 Jan. 2005.
- 30) Andrew C. Revkin, "States Seek to Restore Deer Balance," The New York Times 29 Dec. 2002.
- 31) Roger Segelken, "Surgical Sterilization Snips Away at Deer Population," Cornell News 19 Mar. 2003.
- 32) "Princeton's Deer Hunt Coming to a Premature End," Associated Press, 21 Mar. 2003.
- 33) James L. Boone and Richard G. Wiegert, "Modeling Deer Herd Management: Sterilization Is a Viable Option," *Ecological Modeling* 72 (1994): 175-86.

Canned Hunt Fact Sheet: The Unfair Chase

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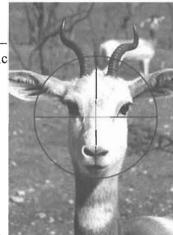
What are canned hunts?

Canned hunting operations—also referred to as "shooting preserves" or "game ranches"—are private trophy hunting facilities that offer their customers the opportunity to kill exotic and native animals trapped within enclosures. Some facilities have even allowed their clients to kill animals remotely via the Internet.

Who are the victims?

The animals killed in canned hunts may come from private breeders, animal dealers, circuses, or even zoos. These animals are frequently hand-raised and bottle fed, so they have lost their natural fear of people. In many facilities, the animals expect to be fed at regular times by familiar people—and the shooters will be there waiting for them.

Semi-tame animals make easy targets, so canned hunt operators can offer their customers a guarantee of "no kill, no pay." The animals are guaranteed something as well—that there will be no escape.



How many canned hunts are there?

The HSUS estimates that there are more than 1,000 canned hunting operations in about two dozen states. Five hundred of these operations are in <u>Texas</u>.

What's the risk of spreading disease?

Because animals on canned hunts are confined in highly concentrated numbers, the <u>risk of disease transmission</u> increases, posing a threat to animals on the inside and outside of the fences. And it is doubtful that those involved in the canned hunting business provide acceptable veterinary care for their animals.

Diseases such as tuberculosis, brucellosis, and <u>chronic wasting disease</u> have been diagnosed in wild and captive wildlife. Although there must legally be fencing around canned hunts, animals often can and sometimes do escape from these facilities. The interstate transport of animals for breeding purposes increases the possibility of spreading the disease.

Montana game ranchers dealt with an outbreak of tuberculosis in elk herds in 1991. Some feared that these elk would infect Yellowstone's free-roaming elk. Michigan has been battling an outbreak of tuberculosis among deer for the past few years due to baiting, which encourages animals to congregate in small areas.

In 2006, as many as 160 elk escaped from a hunting preserve near Rexburg, Idaho. Tests on one of the animals later confirmed that they were not elk, but elk/red deer hybrids. By law they had to be killed, neutered or shipped out of state. Dozens of the animals were shot.

CWD outbreaks have been reported in Colorado, Wyoming, South Dakota, Oklahoma, Nebraska, Montana, Wisconsin, New Mexico and Kansas.

Are canned hunts big business?

Canned hunting is a lucrative and expanding industry. It is estimated that more than 1,000 captive mammal hunting operations are operating in at least two dozen states. Several factors feed into that expansion: The overbreeding of captive exotic animals, the desire by some hunters with <u>plenty of cash</u> for a quick and easy kill, and the incentive to bag exotic mammals provided by <u>Safari Club International</u>'s "Introduced Trophy Game Animals of North America" trophy hunting achievement award.

Do all hunters support canned hunting?

No. As hunter and noted author <u>Ted Kerasote</u> puts it, "'Canned hunting' is a misnomer. More accurately defined as 'shooting animals in small enclosures,' the activity has nothing to do with the motives that inform authentic hunting: procuring healthy, organic food; participating in the timeless cycles of birth, death, and nurturing; honoring the lives that support us; and reconnecting with wildness. No matter where one stands on hunting—vehemently opposed to it or seeing it as yet another way to live sustainably on Earth—one ought to decry shooting animals behind fences."

"Fair chase"—a concept central to the philosophy of many in the hunting community—doesn't exist in canned hunts. The self-described ethical hunting community (including groups like Boone & Crockett, Pope & Young, and the Izaak Walton League) is becoming increasingly vocal in its opposition to canned hunting.

Are canned hunts legal?

As reviled as canned hunting is by non-hunters and hunters alike, no <u>federal law</u> bans the practice, and the <u>majority of states</u> allow it. The regulations implementing the federal Animal Welfare Act do not apply to game preserves, hunting preserves, and canned hunts. Although the Endangered Species Act protects animals listed as endangered or threatened, the Fish and Wildlife Service does not prohibit private ownership of these animals and even allows the canned hunting of endangered species.

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Canned Hunts

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Ducks Unlimited, Inc.

The mission of Ducks Unlimited, Inc. is to fulfill the annual life cycle needs of North American waterfowl by protecting, enhancing, restoring, and managing important wetlands and associated uplands.

Most of DU's 750,000 members are out-doorsmen who celebrate the traditions and the heritage of sport hunting as an integral part of sound wildlife management. While waterfowl hunters are the cornerstone of DU's habitat programs, we welcome others who wish to conserve important wetland habitats. These hunters as well as many others provide the volunteer support and dollars that enable us to conserve habitat.

America's hunters have always been the first to step forward and put their money into conservation. Through the prudent and wise use of these contributions, DU has been able to conserve over 10 million acres of wetlands and related habitats in North America. DU also has active conservation programs in progress in all the states of the U.S. and Mexico and the Canadian provinces with targeted projects in Latin America and the Caribbean. While our programs and projects are designed to benefit waterfowl, they also provide essential habitat for 900 other species of vertebrates.

DU celebrates the traditions of hunting in our award-winning DU Magazine, on the DU TV show (The, World of Ducks Unlimited), on our daily radio program, at our fund-raising events and other day-to-day activities. In addition, many DU volunteers and members are active in training future sportsmen in hunter ethics, firearms safety and conservation through our Greenwing program that has over 70,000 youth members.

DU will continue to support hunting as an important recreational activity, a tool of wildlife management, and a wholesome family activity and we encourage all who enjoy the outdoors to adhere to the highest standards of ethical conduct.

Ducks Unlimited, Inc. One Waterfowl Way Memphis, Tennessee 38120

(901) 758-3825

www.ducksunlimited.org

Delta Waterfowl Foundation

The Delta Waterfowl Foundation is North America's oldest waterfowl conservation organization with a focus on research, education and advocacy in support of the continent's diverse waterfowl and their habitats. Throughout our history, Delta has strongly supported hunting.

North American sportsmen have been the vanguard of conservation efforts across the United States and Canada with their support of government programs such as the Federal Duck Stamp, the Pittman Robertson Act, contributions to non-profit organizations and their tireless support for wildlife and their habitats. There is no other group who has labored harder or invested more in the support of our wildlife resources.

Delta recognizes these contributions, and believes that sportsmen deserve the appropriate credit for their efforts and deserve the same level of commitment from organizations and agencies whose work is made possible from their monetary and moral support. It is for this reason that Delta Waterfowl openly and proudly supports hunting and other consumptive uses. Delta Waterfowl is committed to preserving the legacy of waterfowl hunting and supporting and promoting it as a fundamental component of our role and mission as an organization.

Delta Waterfowl is currently involved in a variety of initiatives that will have long-term benefits for waterfowl hunting. Delta has recently widely promoted a youth waterfowl season in Canada in an effort to reverse the decline in waterfowlers. In addition Delta's Voluntary Restraint Program is an effort to promote and foster a quality ethic in waterfowl hunting. These efforts coupled with a strong dialog with duck and goose hunters across the U.S. and Canada will lead to a strong future of waterfowling.

Delta Waterfowl Foundation PO Box 3128 Bismarck, ND 58502

(888) 987-3695

www.deltawaterfowl.com

Helps to sponsor wildlife research through cooperating organizations and promotes conservation, restoration, and management of all natural resources, especially aquatic areas. Delta Waterfowl Friends of Animals, Inc.

Hunting is cruel. It is deceitful. It is socially unjustifiable. It is ecologically disruptive. Friends of Animals oppose hunting in all its forms.

The cruelty of hunting involves the gratuitous pain caused wild animals. True, wild predators also hunt, but their killing is not gratuitous. Only humans kill for pleasure.

Hunting is deceitful because it claims to be something it isn't. Hunting tries to cover truth with an enormous glossary of euphemisms. Even scientific literature refers to "harvests" and "culls" and "bag limits." Hunters hardly ever like to acknowledge that they actually "kill." Beyond this, hunters are fond of portraying themselves as conservationists, benefactors of wilderness and practitioners of "sustainable utilization of species." Hunters hardly ever acknowledge they actually like to deprive an animal of its life - although this is the whole intent of hunting. Anything else would just be a walk in the woods.

Hunters often portray themselves as "sportsmen" and the animals they kill as "game." But sportsmanship suggests an admirable conduct marked by generosity for fair play. Where is the fair play in a grown man or woman using a modern firearm to kill an inoffensive animal?

Hunting is socially unjustifiable because it is an unnecessary waste of life and of resources. In developed countries such as the United States, most of the land has already been taken from Nature. There is a question of social ethics involving the presumed "right" of hunters to turn what little wild areas are left into seasonal shooting galleries.

Hunting is ecologically disruptive. The hunter, carrying weapons with which his prey did not co-evolve, becomes a superpredator which disrupts natural ecological dynamics. The concept of "natural selection" becomes meaningless among heavily hunted wildlife populations, and hence evolution itself — the very foundation of life in all its diversity — is undermined.

This disruption is exacerbated by huntercontrolled governmental agencies which manipulate wild areas to stimulate evergreater populations of hunted animals. The whole philosophy of deer management is a paradox: the more you hunt, the more deer you get.

Friends of Animals, Inc. 777 Post Road Darien, CT .06820

(203) 656-1522

foaf.tripod.com

An international organization that works to protect animals from cruelty, abuse and institutionalized exploitation. FoA's efforts protect and preserve animals and their habitats around the world. Established: 1957. Membership: 200,000

World Wildlife Fund

The mission of WWF is to protect rare and endangered species and habitats all over the world. We therefore explicitly object to any activity that threatens the survival of any species or the conservation of wilderness areas that support these species. But, WWF does not, for example, oppose hunting by indigenous peoples to meet their basic needs for food and shelter. We do insist that hunting and trapping be regulated so that the survival of any species not be threatened, and we vigorously oppose any hunting or trapping activities which violate international, national, or state law, which includes illegal poaching.

World Wildlife Fund 1250 Twenty-Fourth St. NW Washington, DC 20037-1132

(202) 293-4800

www.worldwildlife.org

Private, tax-exempt international conservation organization. Makes grants to qualified scientists, government agencies and other organizations based on a set of global priorities established in cooperation with the International Union for Conservation of Nature and Natural Resources. Funds are used for research, for habitat management and protection, to encourage sound environmental policy, administration and law, and to provide training and grassroots conservation education. One of 27 independent national affiliates of World Wildlife Fund—International, Gland, Switzerland. Established: 1961

The Wildlife Management Institute

The Wildlife Management Institute supports and encourages recreational hunting that is conducted legally, safely and ethically. The Wildlife Management Institute does not recognize any pursuit or taking of wildlife outside prescribed laws and regulations established and enforced by state, provincial and federal wildlife management agencies as recreational hunting.

Violations of hunting laws and regulations, and ethical tenets, seriously undermine the quality of the hunting experience, and the public and political support of hunting traditions. Violators of hunting laws and regulations should be prosecuted to the fullest extent of the law.

Hunting designated wildlife populations is a legitimate, healthful and worthwhile recreational activity. Hunting also supports and reinforces important family, social and cultural traditions and values. Recreational hunting serves as an important link to improve participants' understanding and appreciation of natural resources and the critical needs for stewardship and management of those resources.

Recreational hunting also helps regulate some wildlife numbers, and reduces wildlife conflicts with people, such as minimizing crop depredations, highway accidents, etc. Revenues from the sale of licenses and permits also provides significant economic support for protecting habitat and managing all forms of wildlife. Recreational hunting provides significant economic benefits to many local and state economics, as well as the nation. In some areas, hunting appropriately provides subsistence for native people.

The Wildlife Management Institute Suite 801 1101 14th Street NW Washington, DC 20005

(202) 371-1808

www.jwdc.com/wmi

A private, nonprofit, scientific and educational organization, supported by corporations, groups and individuals, to advance professional management of natural resources in the interest of conservation and for the benefit of people.

The Wildlife Legislative Fund of America

The Wildlife Legislative Fund of America (WLFA) believes regulated hunting, fishing and trapping are wholesome recreation experiences and reliable wildlife management tools. They deserve to be defended from the attacks of the animal rights movement.

The WLFA is the only national organization with the sole purpose of defending hunting, fishing and trapping in the courts, in legislative bodies and in public education forums. Through its association with national, state and local conservation organizations, the WLFA represents 1.5 million sportsmen and sportswomen in all 50 states and in Washington, D.C. When sportsmen come under attack, the organization provides money and manpower to defend America's outdoor heritage.

Sportsmen and sportswomen are the greatest conservationists in the United States. Thanks to their dedication to conservation and the support of the nation's wildlife managers, America's wildlife is thriving.

To combat a growing animal rights movement, the WLFA promotes its nationwide public education program, *Protect What's Right for Tomorrow*. It was designed to carry the sportsmen's message to the nonhunting public and is currently operational in hundreds of communities.

The organization's Sportsmen's Legal Defense Fund is the nation's only national legal defense capability established exclusively to represent hunters, anglers, trappers and wildlife management agencies in defense of their activities.

The Wildlife Legislative Fund of America 801 Kingsmill Parkway Columbus, OH 43229-1137

(614) 888-4868

Website: www.wlfa.org

The Wildlife Legislative Fund of America and its companion organization, the Wildlife Conservation Fund of America, are the only national organizations with the sole mission and purpose to defend hunting, fishing, trapping and scientific wildlife management.

The Izaak Walton League of America

The Izaak Walton League of America believes hunting should be considered a valuable management tool, where it is compatible with other resource uses and purposes.

Establishment of hunting and fishing seasons should be based upon the best scientific and biological data which can be obtained. These decisions should not be forced by political pressures, and should be calculated to assure healthy reproducing populations of game species and a balance of predacious animals and birds.

All hunting and fishing license revenues, and taxes on sporting arms and ammunition, should be utilized to enhance wildlife and to protect and restore habitat. Hunting should be characterized by the highest order of humaneness, sportsmanship and respect for species hunted.

The Izaak Walton League of America 707 Conservation Lane Gaithersburg, MD 20878

(301) 548-0150

www.iwla.org

Promotes means and opportunities for educating the public to conserve, maintain, protect and restore the soil, forest, water, and other natural resources of the U.S. and promotes the enjoyment and wholesome utilization of those resources. Members and Supporters: 50,000

The Humane Society of the United States

The Humane Society of the United States is strongly opposed to the hunting of any living creature for fun, trophy, or for sport, because of the trauma, suffering, and death to the animals which results. The HSUS also opposes such killing because of the negative effect upon the young who may learn to accept and live with needless suffering and killing. The HSUS believes that a civilized society should not condone the killing of any sentient creature as sport.

The HSUS believes that the characterization of wild animals as "game" denies their intrinsic value and belittles their ecological importance. The Society finds that a great deal of wildlife allegedly killed for management reasons actually is killed as "game" for "sporting" purposes. In such cases, we oppose both the killing and the duplicity. It is the goal of The HSUS to ensure ethical stewardship of wildlife and its environment.

The HSUS recognizes that the welfare and responsible management of animals may, on occasion, necessitate the killing of wildlife. When such killing is permitted, it must be used as a last resort, be demonstrably necessary, be conducted by responsible officials, and methods utilized must result in an instantaneous and humane death.

The HSUS also recognizes that the legitimate needs for human subsistence may necessitate the killing of wildlife. In such cases, killing must be accomplished in a humane and non-wasteful manner and must not involve endangered or threatened animals.

The Humane Society of the United States 2100 L Street NW Washington, DC 20037

(202) 452-1100

www.hsus.org

The National Rifle Association of America

Well-regulated hunting is a beneficial use of renewable wildlife resources which, when left to nature, are finally lost to predators, disease, and often starvation and old age. Proper hunting is in complete accord with the moral tenets of man and the historical facts of his existence. Man's hunting heritage predates recorded history for hundreds of thousands, perhaps millions, of years. This reenactment of the chase today is a healthy recreational exercise, and includes both physical and spiritual components.

The hunter's interest in pursuing his sport has been the principal factor in fostering sound wildlife management and conservation practices. Provision for the hunter's harvest provides the incentive for the hunter's contribution, a contribution without which all else would be lost. The commitment of the hunter's contributions of voluntary taxing, licensing, and regulation assure the propagation of all wildlife.

Hunting is dominant among American traditions and it has contributed substantially to our sound national character. Its future is a primary concern of the Association.

The National Rifle Association of America 11250 Waples Mill Rd Fairfax, VA 22030

(703) 267-1000

www.nrahq.org

Protects and defends the Constitution of the United States, especially with reference to the inalienable right of the individual American citizen to enjoy the use of firearms and to provide for the defense of self, family, property, and the Republic; promotes public safety, law and order, and the national defense; trains members of law enforcement agencies, the armed forces, the militia, and people of good repute in marksmanship and in the safe handling and efficient use of small arms; fosters and promotes the shooting sports; promotes and defends safe hunting as a shooting sport and as a viable and necessary method of fostering the propagation, growth, conservation, and wise use of our renewable wildlife resources. Membership: 3.5 million. Organized: 1871

Outdoor Writers Association of America

An organization of professional communicators, the Outdoor Writers Association of America (OWAA) avoids advocacy within issues not related to journalism. Our mission is to improve the communication and managerial skills of members, set high standards for communicating outdoor subjects, promote outdoor communications in all media, and encourage appropriate natural resource use and conservation. OWAA recognizes legal hunting as an appropriate use of natural resources. Many OWAA members cover and promote hunting.

Outdoor Writers Association of America 121 Hickory St., Suite I Missoula, MT 59801

(406) -728-7434

www.owaa.org

Rocky Mountain Elk Foundation

The Rocky Mountain Elk Foundation strongly supports hunting practiced in a legal, responsible and ethical manner, and believes that the hunting of game animals:

- is a long-standing tradition and part of our cultural heritage
- is a sound wildlife management tool that can help regulate wildlife numbers on a sustainable basis within the carrying capacity of their habitats
- should be practiced with respect for the individual animal, the species and the land
- is a legitimate, outdoor recreational activity

The Foundation upholds the hunting tradition by protecting places where animals will continue to thrive and people will continue to hunt, and encourages the highest standards of ethical conduct among all who hunt. It is our desire to foster a deep love and respect for the land, the wildlife it supports, and the outdoor experience.

Rocky Mountain Elk Foundation 2291 W. Broadway Missoula, MT 59801

(406) 523-4500

www.rmef.org

The Foundation's mission is to ensure the future of elk, other wildlife, and their habitat. Projects funded by RMEF include: land protection, habitat enhancement, management, research, conservation education, and hunting heritage.

Membership: 110,000 Founded: 1984

The Wildlife Legislative Fund of America

The Wildlife Legislative Fund of America (WLFA) believes regulated hunting, fishing and trapping are wholesome recreation experiences and reliable wildlife management tools. They deserve to be defended from the attacks of the animal rights movement.

The WLFA is the only national organization with the sole purpose of defending hunting, fishing and trapping in the courts, in legislative bodies and in public education forums. Through its association with national, state and local conservation organizations, the WLFA represents 1.5 million sportsmen and sportswomen in all 50 states and in Washington, D.C. When sportsmen come under attack, the organization provides money and manpower to defend America's outdoor heritage.

Sportsmen and sportswomen are the greatest conservationists in the United States. Thanks to their dedication to conservation and the support of the nation's wildlife managers, America's wildlife is thriving.

To combat a growing animal rights movement, the WLFA promotes its nationwide public education program, *Protect What's Right for Tomorrow*. It was designed to carry the sportsmen's message to the non-hunting public and is currently operational in hundreds of communities.

The organization's Sportsmen's Legal Defense Fund is the nation's only national legal defense capability established exclusively to represent hunters, anglers, trappers and wildlife management agencies in defense of their activities.

The Wildlife Legislative Fund of America 801 Kingsmill Parkway Columbus, OH 43229-1137

(614) 888-4868

Website: www.wlfa.org

The Wildlife Legislative Fund of America and its companion organization, the Wildlife Conservation Fund of America, are the only national organizations with the sole mission and purpose to defend hunting, fishing, trapping and scientific wildlife management.

National Audubon Society

The National Audubon Society has never been opposed to the hunting of game species if that hunting is done ethically and in accordance with laws and regulations designed to prevent depletion of the wildlife resource. We have made this clear repeatedly in official statements of policy and it remains Audubon policy.

Audubon will advocate restrictions on hunting, including the complete closure of a hunting season, whenever we are convinced that the welfare of the species involved requires it. However, we insist on sound scientific information before deciding these issues.

National Audubon Society 700 Broadway New York, NY 10003

(212) 979-3000

www.audubon.org

Among the oldest and largest conservation organizations in North America. Its purposes are (1) to promote the conservation of wildlife and the natural environment and (2) to educate man regarding his relationship with, and his place within, the natural environment as an ecological system. Founded: 1905

International Association of Fish and Wildlife Agencies

The International Association of Fish and Wildlife Agencies recognizes and supports properly regulated and managed hunting, fishing and trapping as appropriate management techniques for fish and wildlife and their habitat which, in turn, provides recreational opportunities for everyone to enjoy.

The Association recognizes the role of hunting, fishing and trapping as important activities in the development of our conservation heritage and hunters and anglers as important leaders in the conservation movement. The Association supports ethical and safe hunting, fishing and trapping which respects wildlife and their habitat as important components of our legacy as wildlife enthusiasts and conservationists.

We support cooperation with public and private organizations to further professional wildlife management both in North America and throughout the world. The Association supports the management of wildlife habitat and related decisions, such as the establishment of hunting and fishing seasons, based on the best available scientific and biological data. The Association recognizes that hunters, anglers and trappers, as well as many other members of the public who may or may not be involved in these activities, should, and do, cooperate to ensure healthy fish and wildlife populations and adequate habitat for their well being.

The Association supports wildlife-related conservation education which includes an understanding of the management and use of natural resources and the importance of conserving forests, fields, waters and soils for the benefit of this and future generations.

We support law enforcement as essential to the successful implementation of wildlife management plans and programs within a framework that recognizes both the rights and responsibilities of users. The Association supports complete protection of specific fish and wildlife species when necessary to preserve breeding stocks or when species are threatened or in danger of extinction.

Finally, the Association supports the need for public outreach and education so that informed decisions can be made concerning the sustainable use and management of natural resources.

International Association of Fish and Wildlife Agencies 444 North Capitol Street, NW Suite 544 Washington, DC 20001

(202 624-7890

www.sso.org.\iafwa

Association of each state or territory of the United States, each province and territory of Canada, the Commonwealth of Puerto Rico, the United States Government, the Dominion Government of Canada, and each government of a country located in the Western Hemisphere as well as individual Associate members whose principal objective is conservation, protection and management of wildlife and related natural resources.

The National Wildlife Federation

The National Wildlife Federation represents millions of members and supporters whose primary interest is in the conservation of our nation's renewable resources. Although our members and affiliates have many and varied opinions on how these resources might be best utilized, hunters and non-hunters alike support our broad conservation objectives.

We support hunting because, under professional regulation, wildlife populations are a renewable natural resource that can safely sustain taking. Although we understand the moral philosophy of those who feel that hunting is wrong and that wildlife populations should be protected completely, the real and fundamental problem facing wildlife is not hunting but, instead is habitat degradation and destruction. The National Wildlife Federation, therefore, is committed to conserving wildlife habitat.

To accomplish this objective, hunters and non-hunters should unite efforts to preserve wildlife habitat, the key to wildlife variety and abundance. We are hopeful that those having a true interest in meeting this objective, like millions already, will continue to support the National Wildlife Federation and its efforts.

The National Wildlife Federation 11100 Wildlife Center Drive Reston, VA 20190

(703) 438-6000

www.nwf.org

The nation's largest member-supported conservation group, the National Wildlife Federation unites people from all walks of life to protect nature, wildlife and the world we all share. NWF has educated and inspired families to uphold America's conservation tradition since 1936. Its common-sense approach to environmental protection brings individuals, organizations and governments together to ensure a brighter future for people and wildlife.

American Forests

American Forests believes that wildlife and fisheries are a critical component of healthy forest ecosystems. Hunting and fishing under proper regulation are valuable tools in the professional management of forest ecosystems.

Recreation on our forests is an important and growing use of the resource on both public and private lands. Hunting and fishing under appropriate regulation are legitimate forms of forest recreation.

American Forests 910 17th Street, NW, Suite 600 Washington, DC 20006

(202) 955-4500

www.americanforests.org

American Forests, the nation's oldest citizens non profit conservation organization and a world leader in tree planting for environmental restoration, helps people, corporations, governments and organizations understand the critical role played by trees and forests in a wide range of environmental issues including soil conservation, water quality, air quality and wildlife habitat. American Forests provides action opportunities to improve the environment through the Global ReLeaf tree planting program.

American Humane Association

The American Humane Association is opposed to the hunting of any living creature for fun, a trophy, or for simple sport. The AHA believes that sport hunting is a form of exploitation of animals for the entertainment of the hunter, and is contrary to the values of compassion and respect for all life that inform American Humane's mission.

American Humane finds that wildlife management often consists of creating habitat that favors "game" species, which creates an overpopulation available for the purpose of sport hunting. We oppose these practices and favor wildlife "management" requiring the least human manipulation, favoring all wildlife in an ecosystem equally. On occasions when all other avenues have been exhausted and there remains a demonstrable necessity to kill some wildlife, it should be performed by responsible officials and methods utilized must result in instantaneous and humane death.

American Humane considers sport hunting a violation of the inherent integrity of animals and disruptive of the national balance of the environment through human manipulation, and calls for positive action to prevent such cruelties.

American Humane Association 63 Inverness Drive East Englewood, CO 80112-5117

(800) 227-4645

www.americanhumane.org

A national federation of individuals and agencies for the prevention of cruelty, especially to children and animals.
Organized: 1877

Defenders of Wildlife

Defenders of Wildlife is neither an antihunting nor a pro-hunting organization, but most of its 430,000 members are non-hunters and their concern is with the restoration and protection of all species of wildlife and their habitats. Defenders' goal is to win permanent protection for the homes of every native plant and animal species through political action to save representative examples of all plant and animal communities and wildlife dispersal corridors between them.

Defenders' traditional special campaigns include restoration and protection of the mammalian predators — the wolf, the mountain lion, the coyote and others and reduction in the use of the leghold trap and wildlife-killing agricultural chemicals. It views the National Wildlife Refuge Systems as the core of a national network of diversity maintenance areas where wildlife reproduction success is given top priority over human uses of all kinds consumptive and nonconsumptive. It has opposed hunting of some species --- sandhill cranes (where they could be confused with whooping cranes), tundra swans (where they could be confused with trumpeter swans), mountain lions (with dogs, in California's fragmented habitats) - and proposed reductions in bag limits to leave more prey for the wild predators (e.g. to leave more deer for Florida Panthers in the Big Cypress Preserve).

Its "bottom line" goal is sustained populations of all native wildlife species for the enjoyment of all and for their intrinsic value.

Defenders of Wildlife 1101 14th Street NW Washington, DC 20005

(202) 682-9400

www.defenders.org.

The Wilderness Society

The Wilderness Society views hunting as a legitimate use in wilderness areas, national forests, lands managed by the Bureau of Land Management, and certain wildlife areas, subject to appropriate regulation for species protection. Because they provide such strong protection for wildlife habitat, wilderness areas offer some of the highest quality hunting experiences found anywhere. The Wilderness Society recognizes that hunters have made a strong contribution to the protection of these lands and waters, and we are pleased to have worked often as partners in these efforts.

The Wilderness Society 1615 M Street, NW Washington, DC 20036

202-833-2300

www.wilderness.org

National conservation organization formed to secure preservation of wilderness and proper management of all federal lands, carry on an education program concerning the value of wilderness and how it may best be used and preserved in the public interest, make and encourage scientific studies of wilderness, and mobilize cooperation in resisting degradation of federal lands.

Membership: 175,000.
Organized: 1935

National Shooting Sports Foundation

Since the National Shooting Sports
Foundation was created "to foster in the
American public a better understanding of
and more active participation in the shooting
sports," its position on hunting as properly
defined is one of strong support. NSSF
believes that sport hunting is a desirable part
of modern recreational patterns. NSSF feels
that Americans have a right to hunt but to do
so on private land is a privilege extended by
the landowner.

Hunting with proper controls is an effective and needed tool of that game management which has become the responsibility of modern man everywhere. It is the function of the hunting-interested to transfer their knowledge and their understanding of the hunting ethic to the younger people just as it has always been their function, at times theirs alone. To finance the conservation of both game and non-game wildlife. Over recent decades, such support, public and private, has amounted to some 14 billion dollars, with another 1.5 billion dollars being added every year.

No game species has been moved toward serious threat of extinction by sport hunting alone. On the contrary, numerous species have been returned to healthy numbers through hunter-sponsored, hunter-financed habitat management. NSSF believes that,

in the ecological and environmental future of this nation, hunting has an important role, just as the hunter hunself has played a vital part in its past.

National Shooting Sports Foundation Flintlock Ridge Office Center 11 Mile Hill Road Newtown, CT 06470-2359

(203) 426-1320

www.nssf.org

Non-profit educational trade-sponsored association intended to foster in the public mind a better understanding of and more active participation in the shooting sports and in practical conservation.

Founded: 1960

The Sierra Club

For more than 100 years, the Sierra Club's policy has been that responsible use of the earth's resources can include hunting and fishing, appropriately regulated.

The Sierra Club seeks whenever possible to work side by side with hunters to protect natural habitats. Pollution of land and waters, draining and development of wetlands, loss of woodlands, these are all reasons for hunters and Sierra Club members to work together.

There are exceptional specific instances, though, when the Sierra Club does oppose hunting in certain areas or in the case of specific species. For example, federal law prohibits most hunting in national parks and national monuments managed by the National Park Service. These are lands that are protected in trust for all Americans to come and visit and be inspired by the unique beauty and life of the place. The Sierra Club supports this prohibition.

The Sierra Club also opposes hunting of animals that are endangered or threatened with extinction. And the Sierra Club may oppose hunting in specific cases where scientific evidence indicates that a species needs protection, even if that species has not been formally listed as threatened or endangered. Sometimes, for financial or political reasons, a formal listing is delayed for years even though there is reasonable scientific evidence that the species and its habitats need protection.

The Sierra Club has thousands of members who hunt and fish as they explore, enjoy and work to protect our country's great natural lands. We have found we have a lot in common with hunters and anglers. Our common experience and values involve spending time outdoors in wild and natural places and being intensely aware and observant of natural life around us.

Together we form a powerful alliance for conserving our fish and wildlife resources and the natural habitats they depend upon.

The Sierra Club 85 Second Street, 2nd Floor San Francisco, CA 94105-3441

(415) 977-5500

www.sierra club.org

The Sierra Club was founded in 1892 by John Muir.

The mission of the Sierra Club is:
To explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives.

The Fund For Animals

The Fund For Animals is unalterably opposed to the recreational killing of wildlife. Besides being a piteously unfair and cruel slaughter of innocent animals, sport hunting is also ecologically destructive. Despite claims to the contrary, hunters take a heavy toll on endangered and threatened animals. Last year alone, they killed dozens of bald and golden eagles and grizzly bears and even such extremely rare animals as Florida panthers and whooping cranes. Despite dire warnings about the future of duck populations, hunters annually position themselves along the migratory flyways and massacre, often indiscriminately, millions of ducks. And while the black bear cannot yet be considered endangered, hunting is leading to regional scarcity of the bears in many parts of its range. In addition, hunters have littered the environment with toxic lead shot, which animals will be living and dying with for decades.

There are also more subtle ecological processes that hunting disrupts such as natural selection. Hunting by humans does not ensure the survival of the fittest animals, but precisely the opposite — individuals who would not normally have reproductive success will have it because hunters do not select the weakest animals as nature does. By often killing the ablest, hunters downgrade the quality of the gene pool. It's no surprise that some prologists refer to hunting as "evolution in reverse."

Much of the problem is a consequence of how our government wildlife agencies operate. Rather than being concerned about the needs of wildlife, they cater to the desires of hunters.

It's a fact that the prime function of the state wildlife agencies is not to protect individual animals or biological diversity, but to propagate "game" species populations for hunters to shoot. The agencies' expenditures demonstrate the bias. On average, they spend well more than 90 percent of their funds on game species projects, even though non-game animals constitute the vast majority of each state's fauna. State agencies spend millions manipulating habitat for "game" species by burning and clearcutting forests. They pen-rear and stock "game" animals to increase "shooting opportunities." And they pour millions of dollars into law enforcement of game regulations and into hunter education, which includes the construction of target-shooting ranges. The fact is, they're out to conserve hunting, not wildlife.

And it's not just an issue of animals' rights, but one of the public's rights as well. As a consequence of widespread hunting, non-consumptive wildlife enthusiasts cannot safely walk in the woods during hunting season. They get fewer opportunities to view wild animals, which become skittish or nocturnal for fear of being shot by humans. And most importantly, they are denied an equal voice in determining how our wildlife is treated. A mere seven percent minority of the public — the hunters — has 100 percent control of our wildlife.

The Fund For Animals 200 West 57th Street New York, NY 10019

(212) 246-2096

www.fund.org

For these reasons and others, The Fund for Animals opposes sport hunting and seeks a restructuring of state wildlife boards and commissions to ensure that all parties legitimately concerned about wildlife are proportionately represented.

The Wildlife Society

Hunting has co-evolved with the needs and cultures of mankind. Archaeological evidence indicates that early cultures were dependent upon wild animals for subsistence. As skills in animal husbandry and agriculture were acquired, dependence on hunting for subsistence decreased. Today hunting is principally useful for recreational purposes, for utilization of harvestable surplus to benefit man, and for controlling populations.

Most wild animal populations produce more animals than their habitats can support. These surplus animals are removed by mortality factors that regulate population numbers within the limits of the habitat. Hunting can be used to remove a portion of these excess animals that would otherwise be lost to natural mortality.

Professional wildlife managers are charged with the responsibility of managing wildlife populations in an ecologically sound and socially acceptable manner. Hunting, when based on biological information and properly regulated, can be used effectively to satisfy this responsibility. In addition, hunting, through licenses and taxes, provides the major source of financing for habitat acquisition, law enforcement, research, and management programs for wildlife, both game and nongame species.

The policy of The Wildlife Society, in regard to hunting, is to:

- 1. Assist decision-makers so that judgements on hunting and the welfare of wildlife are guided by both biological and societal consideration.
- 2. Endorse the principle that hunting, when properly regulated, is a biologically sound means of managing wildlife populations.
- 3. Encourage expansion of programs for hunters to increase their knowledge of wildlife ecology and management and to emphasize hunter ethics and responsibilities.

The Wildlife Society 5410 Grosvenor Lane, Suite 200 Bethesda, MD 20814

(301) 897-9770

www.wildlife.org

Association for those professionally employed in the biological or related fields of wildlife conservation. Aims to establish and maintain the highest possible professional standards; to develop wildlife conservation and management along sound biological lines; and to prepare and disseminate information to effect these ends. Membership: 9,100.

Organized: 1937.

This is a list of federal agencies that have responsibilities involving wildlife and are referenced in Project WILD activities. State wildlife agencies may be contacted directly in each state. Project WILD encourages educators and students to contact a range of organizations in order to make informed decisions. It is recommended that requests be as specific as possible, mailed on behalf of a class rather than each individual student and sent with a stamped self-addressed envelope for return of requested materials.

Federal Agencies

Bureau of Land Management Interior Building 1849 C Street, NW, Mail Stop LS406 Washington, DC 20240 (202) 452-5125 www.blm.gov

Cooperative Extension Service U.S. Department of Agriculture 800 Ninth Street, SW Washington, DC 20024 (202) 720-3029

National Marine Fisheries Service U.S. Department of Commerce, NOAA 1315 East-West Highway Silver Spring, MD 209l0 (301) 713-2370 www.nefsc.nmfs.gov

National Park Service Interior Building PO Box 37127 Washington, DC 20013-7127 (202) 208-4747

www.nps.gov

Natural Resources Conservation Service PO Box 2890 Washington, DC 20013 (202) 720-4525 www.nrcs.usda.gov

U.S. Army Corps of Engineers Public Affairs 20 Massachusetts Avenue, NW Washington, DC 20314-1000 (202) 761-0011 www.hq.usace.army.mil/cepa/cepa.htm 4100 Independence Ave., SW Washington, DC 20250 (202) 720-4623 www.foodsafety.gov

U.S. Department of Agriculture Office of Public & Media Outreach

U.S. Environmental Protection Agency Environmental Education Division Mail Code 1704 401 M Street, SW Washington, DC 20460 (202) 260-4965 www.epa.gov

U.S. Fish and Wildlife Service Media Services Main Interior Building 1849 C Street NW, Rm 3359 Washington, DC 20240 (202) 208-5634

www.nctc.fws.gov/MEDIA.html

U.S. Fish and Wildlife Service Reference Center 5430 Grosvenor Lane, Suite 110 Bethesda, MD 20814 (301) 492-6403 www.fws.gov

USDA Forest Service, CF Natural Resource Conservation Education PO Box 96090 Washington, DC 20090-6090 (202) 205-1545 www.fs.fed.us

Regional Offices

U.S. Environmental Protection Agency

U.S. EPA Region 1 Environmental Education Program 1 Congress Street, Suite 1100 Boston, MA 02114-2023 (617) 918-1111 www.epa.gov/region01/

U.S. EPA Region 2 Environmental Education Program 290 Broadway, 26th Floor New York, NY 10007 (212) 637-3671 www.epa.gov/region02/

U.S. EPA Region 3 Environmental Education Program 1650 Arch Street (3CG00) Philadelphia, PA 19103-2029 www.epa.gov/region3/

U.S. EPA Region 4
Environmental Education Program
61 Forsyth Street SW
Atlanta, GA 30303
(404) 562-9900
www.epa.gov/region4/

U.S. EPA Region 5 Environmental Education Program 77 West Jackson Boulevard (PI-19J) Chicago, IL 60604 (312) 353-3209 www.epa.gov/region5/

U.S. EPA Region 6 Environmental Education Program 1445 Ross Avenue (6XA) Dallas, TX 75202-2733 (214) 665-2200 www.epa.gov/earthr6/index.htm

U.S. EPA Region 7 Environmental Education Program 901 North Fifth Street Kansas City, KS 66101 (913) 551-7003 www.epa.gov/region07/

U.S. EPA Region 8 Environmental Education Program 999 18th Street, Suite 500 Denver, CO 80202-2405 (303) 312-6605 www.epa.gov/region8/ U.S. EPA Region 9 Environmental Education Program 75 Hawthorne Street (CGR-3) San Francisco, CA 94105 (415) 744-1161 www.epa.gov/region09/

U.S. EPA Region 10 Environmental Education Program 1200 Sixth Avenue (EXA-142) Seattle, WA 98101 (206) 553-1207 www.epa.gov/region10/

United States Forest Service

U.S. Forest Service Northern Region (R-1) 200 East Broadway Missoula, MT 59807-7669 (406) 329-3511 www.fs.fed.us/r1/

U.S. Forest Service Rocky Mountain Region (R-2) PO Box 25127 Lakewood, CO 80225 (303) 275-5350 www.fs.fed.us/r2/

U.S. Forest Service Southwestern Region (R-3) 517 Gold Avenue SW Albuquerque, NM 87102 (505) 842-3292 www.fs.fed.us/r3/

U.S. Forest Service Intermountain Region (R-4) Federal Building 324 25th Street Ogden, UT 84401-2310 (801) 625-5306 www.fs.fed.us/r4/

U.S. Forest Service Pacific Southwest Region (R-5) 1323 Club Drive Vallego, CA 94592 (707) 562-8737 www.fs.fed.us/r5/

U.S. Forest Service Pacific Northwest Region (R-6) PO Box 3623 Portland, OR 97208-3623 (503) 808-2592 www.fs.fed.us/r6/

continued

U.S. Forest Service Southern Region (R-8) 1720 Peachtree Road NW Atlanta, GA 30309 (404) 347-2384 www.fs.fed.us/r8/

U.S. Forest Service
Eastern Region (R-9)
310 West Wisconsin Avenue, Room 500
Milwaukee, WI 53203
(414) 297-3507
www.fs.fed.us/r9

U.S. Forest Service Alaska Region (R-10) 709 West 9th Street PO Box 21628 Juneau, AK 99802-1628 (907) 586-8863 www.fs.fed.us/r10

U.S. Forest Service Northeastern Area-State & Private Forestry 11 Campus Drive Newtown Square, PA 19023 (610) 557-4160 www.fs.fed.us/na/

Organizations

American Cetacean Society National Headquarters PO Box 2639 San Pedro, CA 90731-0943 (310) 548-6279 www.acsonline.org

American Fisheries Society 5410 Grosvenor Lane Bethesda, MD 20814-2199 (301) 897-8616

www.fisheries.org

American Humane Association 63 Inverness Drive East Englewood, CO 80112 (303) 792-9900

www.americanhumane.org

American Sport Fishing Association & Future Fisherman Foundation 1033 N. Fairfax Street, Suite 200 Alexandria, VA 22314 (703) 519-9691 www.asafishing.org

Animal Protection Institute 2831 Fruit Ridge Road Sacramento, CA 95820 (916) 731-5521 www.api4animals.org

Animal Welfare Institute PO Box 3650 Washington, DC 20007 (202) 337-2333

www.animalwelfare.com

Center for Coastal Studies 59 Commercial Street, Box 1036 Provincetown, MA 02657 (508) 487-3622

www.coastalstudies.org

Center for Marine Conservation 1725 DeSales Street, NW, Suite 600 Washington, DC 20036 (202) 429-5609 www.cmc-ocean.org

Cetacean Society International PO Box 953 Georgetowne, CT 06829 (203) 431-1606

http://elfi.com/csihome.html

Cousteau Society 870 Greenbriar Circle, Suite 402 Chesapeake, VA 23320 (757) 523-9335 www.cousteau.org

Defenders of Wildlife 1101 14th Street, NW, Suite 1400 Washington, DC 20005 (202) 682-9400 www.defenders.org

Ducks Unlimited 1 Waterfowl Way Memphis, TN 38120 (901) 758-3825 www.ducks.org

Fund for Animals 200 W. 57th Street, Suite 508 New York, NY 10019 (212) 246-2096

www.fund4animals.org

Greenpeace 702 11th Street, NW Suite #300 Washington, DC 20001 (202) 462-1177 www.greenpeaceusa.org

International Association of Fish and Wildlife Agencies 444 North Capitol Street ,NW, Suite 544 Washington, DC 20001 (202) 624-7890 www.sso.org/iafwa

International Whaling Commission The Red House 135 Station Road Impington, Cambridge UK CB4 9NP England

www.ourworld.compuserve.com/homepages/iwcof fice

Izaak Walton League of America 707 Conservation Lane Gaithersburg, MD 20878-2983 (301) 548-0150 www.iwla.org

National Association for Humane and Environmental Education Humane Society of the United States 2100 L Street, NW Washington, DC 20037 (202) 452-1100

www.hsus.org

National Association of Conservation Districts PO Box 855 League City, TX 77574-0855 (281) 332-3402 www.nacdnet.org

National Audubon Society 700 Broadway New York, NY 10003 (212) 979-3000 www.audubon.org

National Rifle Association Wildlife Management Division 11250 Waples Mills Road Fairfax, VA 22030 (703) 267-1000 www.nra.org

National Wildlife Federation 8925 Leesburg Pike Vienna, VA 22184 (703) 790-4000 www.nwf.org

National Wild Turkey Federation 770 Augusta Road Edgefield, SC 29824 (803) 637-3106 www.nwtf.com New England Aquarium Central Wharf Boston, MA 02110 (617) 973-5200 www.neaq.org

Rocky Mountain Elk Foundation 2291 W. Broadway P.O Box 8249 Missoula, MT 59807 1-800-CALL-ELK www.rmef.org

Safari Club International 4800 West Gates Pass Road Tucson, AZ 85745 (520) 620-1220 www.safariclub.org

Sierra Club 85 Second Street, 2nd Floor San Francisco, CA 94105 (415) 977-5500 www.sierraclub.org

The Nature Conservancy 4245 North Fairfax Drive, Suite 100 Arlington, VA 22203 (703) 841-5300 www.tnc.org

The Wilderness Society 1615 M Street, NW Washington, DC 20036 (202) 833-2300 www.wilderness.org

The Wildlife Society 5410 Grosvenor Lane, Suite 200 Bethesda, MD 20814

(301) 897-9770 www.wildlife.org

Whale Center of New England Box 159 Gloucester, MA 01930 (978) 281-6351 www.whalecenter.org

Wildlife Management Institute 1101 14th Street, NW, Suite 801 Washington, DC 20005

(202) 371-1808

www.wildlifemgt.org/wmi

World Wildlife Fund 1250 24h Street, NW Washington, DC 20037 1-800-CALL-WWF

www.wwf.org



U.S. Fish & Wildlife Service

Federal Aid in Wildlife Restoration (Pittman-Robertson)

THE FEDERAL AID IN WILDLIFE RESTORATION ACT Where Does the Money Come From

The Federal Aid in Wildlife Restoration Act, popularly know as the Pittman-Robertson Act, was approved by Congress on September 2, 1937, and begin functioning July 1, 1938.

The purpose of this Act was to provide funding for the selection, restoration, rehabilitation and improvement of wildlife habitat, wildlife management research, and the distribution of information produced by the projects. The Act was amended October 23, 1970, to include funding for hunter training programs and the development, operation and maintenance of public target ranges.

Funds are derived from an 11 percent Federal excise tax on sporting arms, ammunition, and archery equipment, and a 10 percent tax on handguns. These funds are collected from the manufacturers by the Department of the Treasury and are apportioned each year to the States and Territorial areas (except Puerto Rico) by the Department of the Interior on the basis of formulas set forth in the Act. Funds for hunter education and target ranges are derived from one-half of the tax on handguns and archery equipment.

Each state's apportionment is determined by a formula which considers the total area of the state and the number of licensed hunters in the state. The program is a cost-reimbursement program, where the state covers the full amount of an approved project then applies for reimbursement through Federal Aid for up to 75 percent of the project expenses. The state must provide at least 25 percent of the project costs from a non-federal source.

PROGRAMS

- Hunter Education-- Shooting Range Program
- Section 10 Hunter Education Enhancement Interim Guidance PDF

CONTACT CONSULTANTS

For any further information about the Wildlife Restoration Act Contact: The Division of Federal Assistance FederalAid@fws.gov

For any further information about Hunter Education and the Act Contact: The Division of Federal Assistance FederalAid@fws.gov

REFERENCES:

Life Histories (series), ODNR, Division of Wildlife, Columbus, Ohio www.wildohio.com WILD in the City Series, Wisconsin Department of Natural Resources, Madison, Wisconsin, 1996 Wild Ohio Magazine, ODNR, Division of Wildlife, Columbus, Ohio www.wildohio.com Wild Ohio Magazine for Kids, ODNR, Division of Wildlife, Columbus, Ohio www.wildohio.com Project WILD, Council for Environmental Education, Houston, Texas, 2000 www.projectwild.org Deer Damage Publications, ODNR, Division of Wildlife, Columbus, Ohio www.wildohio.com **Deer Collision Reports**, Ohio Insurance Institute, 2008 www.ohioinsurance.org News Releases on Ohio Deer Seasons, ODNR, Division of Wildlife, Columbus, Ohio Ohio Hunter Education Manual, ODNR, Division of Wildlife, Columbus, Ohio, 2000 Why do Hunters Hunt?, http://hunting.about.com/library/weekly/aa122299.htm The Wilderness Society, http://www.wilderness.org, Washington, D.C. Whitetails Unlimited, http://www.whitetailsunlimited.org, Sturgeon Bay, Wisconsin People for the Ethical Treatment of Animals (PETA), http://www.peta.org, Norfolk, Virginia The Humane Society of the United States, http://www.hsus.org, Washington, D.C. The National Shooting Sports Foundation, http://www.nssf.org, Newtown, Connecticut Sport Fish and Wildlife Restoration, U.S. Fish and Wildlife Service http://wsfrprograms.fws.gov/Subpages/GrantPrograms/WR/WR Act.htm



For More Information on Ohio's Wildlife and Project WILD, Contact Your Local Office:







- ♦ ODNR-DIVISION OF WILDLIFE CENTRAL OFFICE 2045 MORSE RD., BLDG G., COLUMBUS, OH 43229
- 1-800-WILDLIFE OR 614-265-6300 www.wildohio.com
- ♦ DIVISION OF WILDLIFE—DISTRICT 1 OFFICE 1500 DUBLIN RD., COLUMBUS, OH 43215
- 614-644-3925
- ♦ DIVISION OF WILDLIFE—DISTRICT 2 OFFICE 952 LIMA AVE., FINDLAY, OH 45840
- 419-424-5000
- DIVISION OF WILDLIFE—DISTRICT 3 OFFICE 912 PORTAGE LAKES DR., AKRON, OH 44319
- 330-644-2293
- ♦ DIVISION OF WILDLIFE—DISTRICT 4 OFFICE 360 E. STATE ST., ATHENS, OH 45701
- 740-589-9930
- ◆ DIVISION OF WILDLIFE—DISTRICT 5 OFFICE 1076 OLD SPRINGFIELD PK., XENIA, OH 45385
- 937-372-9261

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